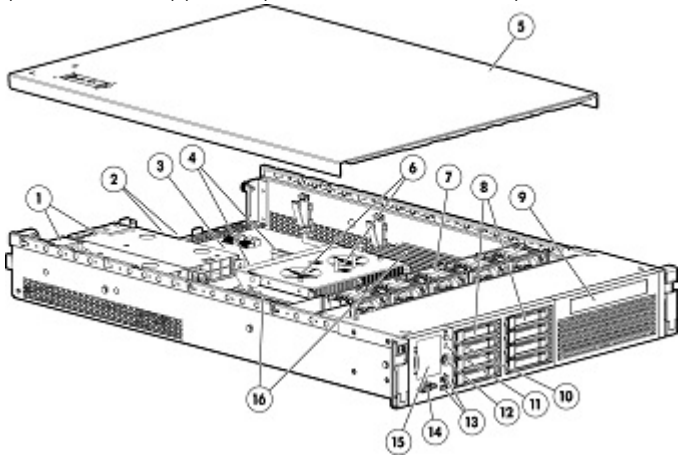
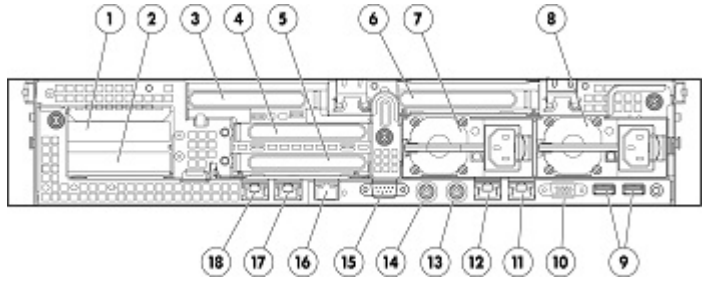
*Overview*

As the leading 2P 2U AMD rack server, the HP ProLiant DL385 G7 is designed with virtualization in mind, yet flexible and expandable to support any business need in many environments from corporate datacenters to sophisticated SMBs.





Front View:

1. Redundant Power Supplies
2. Two HP NC382i Dual Port Multifunction NICs
3. SD Card Reader
4. PCI Riser Slots
5. Quick Removal Access Panel
6. AMD Opteron Processors (up to 2)
7. Hot Plug Redundant Fans
8. Hard Drive Bays
9. Slimline Optical bay
10. UID LED Button
11. Health LED
12. Power On/Standby Button and System Power LED
13. USB Connectors (2)
14. Video Connector
15. System Insight Display
16. Twenty-four sockets for DDR3 Memory

Rear View:

1. PCI slot 5
2. PCI slot 6
3. PCI slot 4
4. PCI slot 2
5. PCI slot 3
6. PCI slot 1
7. Power Supply 2
8. Power Supply 1
9. USB Connectors (2)
10. Video Connector
11. NIC 1 Connector
12. NIC 2 Connector
13. Mouse Connector
14. Keyboard Connector
15. Serial Connector
16. iLO3 connector
17. NIC 3 Connector
18. NIC 4 Connector

## What's New

- Support for 4-core AMD Opteron™ 6204 processor
- Support for 1600MHz DDR3 memory kits

*Standard Features*

NOTE: For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

| | |
|---|---|
| Processor<br>One of the following depending on Model | Sixteen-Core Processors<br>AMD Opteron™ 6282SE (2.60GHz/16-core/16MB/140W TDP) Processor<br>AMD Opteron™ 6276 (2.30GHz/16-core/16MB/115W TDP) Processor<br>AMD Opteron™ 6274 (2.20GHz/16-core/16MB/115W TDP) Processor<br>AMD Opteron™ 6272 (2.10GHz/16-core/16MB/115W TDP) Processor<br>AMD Opteron™ 6262HE (1.60GHz/16-core/16MB/85W TDP) Processor<br>Twelve-Core Processors<br>AMD Opteron™ 6238 (2.60GHz/12-core/16MB/115W TDP) Processor<br>AMD Opteron™ 6234 (2.40GHz/12-core/16MB/115W TDP) Processor<br>AMD Opteron™ 6180SE (2.50GHz/12-core/12MB/140W TDP) Processor<br>AMD Opteron™ 6176SE (2.30GHz/12-core/12MB/140W TDP) Processor<br>AMD Opteron™ 6176 (2.30GHz/12-core/12MB/115W TDP) Processor<br>AMD Opteron™ 6174 (2.20GHz/12-core/12MB/115W TDP) Processor<br>AMD Opteron™ 6172 (2.10GHz/12-core/12MB/115W TDP) Processor<br>AMD Opteron™ 6166HE (1.80GHz/12-core/12MB/85W TDP) Processor<br>Eight-Core Processors<br>AMD Opteron™ 6220 (3.0GHz/8-core/16MB/115W TDP) Processor<br>AMD Opteron™ 6212 (2.60GHz/8-core/16MB/115W TDP) Processor<br>AMD Opteron™ 6140 (2.60GHz/8-core/12MB/115W TDP) Processor<br>AMD Opteron™ 6136 (2.40GHz/8-core/12MB/115W TDP) Processor<br>AMD Opteron™ 6134 (2.30GHz/8-core/12MB/115W TDP) Processor<br>AMD Opteron™ 6128 (2.0GHz/8-core/12MB/115W TDP) Processor<br>AMD Opteron™ 6132HE (2.20GHz/8-core/12MB/85W TDP) Processor<br>AMD Opteron™ 6128HE (2.0GHz/8-core/12MB/85W TDP) Processor<br>Quad-Core Processors<br>AMD Opteron™ 6204 (3.30GHz/4-core/16MB/115W TDP) Processor<br>NOTE: Up to 2 processors supported. High Performance Model configurations include two processors, 16GB system memory, 1G storage controller memory, FBWC, DVDRW, ICE license, Redundant 750W Power Supplies, and 6 hot plug redundant fans. |
| Cache Memory<br>One of the following depending on Model | 16MB (1 x 16MB) Level 3 cache memory<br>NOTE: Supported on 6200 series processors.<br>12MB (1 x 12MB) Level 3 cache memory<br>NOTE: Supported on 6100 series processors. |
| Chipset | AMD SR5690 Northbridge and SP5100 Southbridge |

*Standard Features*

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|---|---|
| **Upgradeability** | Upgradeable to two processors |
| **Memory Protection** | Advanced ECC<br>Online Spare |

**Memory**

| | |
|---|---|
| Type | DDR3 Registered (RDIMM) and Unbuffered (UDIMM) |
| Maximum (RDIMM) | 512GB |
| Maximum (UDIMM) | 64GB |

NOTE: If only one processor is installed, only half the DIMM slots are available
NOTE: Depending on the memory configuration and processor model, the memory speed may run at 1600Mhz,1333MHz, 1066MHz, or 800MHz. Please see the Online Memory Configuration Tool at: www.hp.com/go/ddr3memory-configurator.

**Network Controller**

Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total)
NOTE: 1GB of memory is sufficient to support up to eight Total Ports. 2GB of memory is required if nine or more Total Ports have been selected.

**Expansion Slots**

NOTE: Up to 6 PCI slots (PCIe slots are Gen 2). Standard BTO riser with PCIe (1) x8 FL/FH, (2) x4 HL/FH. Optional second risers with PCIe (1) x8, (2) x4; or a PCIe/PCI-X mixed riser with (2) PCI-X, (1) x8; or a x16 225w PCIe riser with (1) x16; or a (2) x8 Dual Port 10GbE riser.

| Primary Riser (Standard) | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|---|---|---|---|---|---|---|---|
| | 1 | PCI-e Gen2 | x8 | x16 | 6 | Full Length/Full Height | |
| | 2 | PCIe Gen2 | x4 | x8 | 12 | Half length, full height | |
| | 3 | PCIe Gen 2 | x4 | x8 | 15 | Half length, full height | |

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number
NOTE: Bus width - Indicates the number of physical electrical lanes running to the connector
NOTE: Only single wide cards are supported

| PCIe Riser (Optional Secondary) | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|---|---|---|---|---|---|---|---|
| | 4 | PCIe Gen2 | x8 | x16 | 18 | Full Length/Full Height | |
| | 5 | PCIe Gen2 | x4 | x8 | 24 | Low Profile | |
| | 6 | PCIe Gen2 | x4 | x8 | 27 | Low Profile | |

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number
NOTE: Bus width - Indicates the number of physical electrical lanes running to the connector
NOTE: Only single wide cards are supported

| PCIe/PCI-X Riser (Optional Primary) | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|---|---|---|---|---|---|---|---|
| | 1 | PCI-X | 64-bit | N/A | 7 | Full length, Full height | |
| | 2 | PCI-X | 64-bit | N/A | 7 | Half Length, Full Height | |
| | 3 | PCIe Gen 2 | x8 | x8 | 11 | Half Length, Full Height | |

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number
NOTE: Bus width - Indicates the number of physical electrical lanes running to the connector
NOTE: Only single wide cards are supported
NOTE: PCI-X support is limited to PCI-X cards only

| PCIe/PCI-X (Optional Secondary) | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|---|---|---|---|---|---|---|---|
| | 4 | PCI-X | 64-bit | N/A | 19 | Full Length/Full Height | |
| | 5 | PCI-X | 64-bit | N/A | 19 | Low Profile | |
| | 6 | PCIe Gen2 | x8 | x8 | 23 | Low Profile | |

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number
NOTE: Bus width - Indicates the number of physical electrical lanes running to the connector
NOTE: Only single wide cards are supported
NOTE: PCI-X support is limited to PCI-X cards only

| x16 PCIe Riser (Optional Primary) | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|---|---|---|---|---|---|---|---|
| | 1 | PCIe Gen2 | x16 | x16 | 6 | Full Length/Full Height | Supports up to 225W |

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number
NOTE: Bus width - Indicates the number of physical electrical lanes running to the connector
NOTE: Only single wide cards are supported

| x16 PCIe Riser (Optional Secondary) | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|---|---|---|---|---|---|---|---|
| | 1 | PCIe Gen2 | x16 | x16 | 18 | Full Length/Full Height | Supports up to 225W |

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number
NOTE: Bus width - Indicates the number of physical electrical lanes running to the connector
NOTE: Only single wide cards are supported

*Standard Features*

| (2) x8 PCI-E Riser (Optional Primary) | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|---|---|---|---|---|---|---|---|
| | 1 | PCIe Gen2 | x8 | x16 | 6 | Full Length/Full Height | |
| | 2 | PCIe Gen2 | x8 | x16 | 9 | Half length, full height | |

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number
NOTE: Bus width - Indicates the number of physical electrical lanes running to the connector
NOTE: Only single wide cards are supported
NOTE: The shared network port is only supported in the secondary riser connector

| (2) x8 PCI-E Riser (Optional Secondary) | Expansion Slots # | Technology | Bus Width | Connector Width | Bus Number | Form Factor | Notes |
|---|---|---|---|---|---|---|---|
| | 4 | PCIe Gen2 | x8 | x16 | 18 | Full Length/Full Height | |
| | 5 | PCIe Gen2 | x8 | x16 | 21 | Low Profile | |

NOTE: Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number
NOTE: Bus width - Indicates the number of physical electrical lanes running to the connector
NOTE: Only single wide cards are supported
NOTE: The shared network port is only supported in the secondary riser connector

**Storage Controller**
One of the following depending on Model

Entry Models: HP Smart Array P410i/Zero Memory Controller
Base Models: HP Smart Array P410i/256 MB Controller
HP Smart Array P410i/512MB FBWC Controller
High Performance Models: HP Smart Array P410i/1G FBWC Controller
Available upgrades: 1G FBWC, 512MB FBWC, 256MB, 512MB with BBWC, Battery kit upgrade (for the 256MB cache), and Smart Array Advanced Pack (SAAP)
NOTE: RAID 6 and 60 requires purchase of HP Smart Array Advanced Pack (516471-B21).

**Internal Storage Devices**

Diskette Drive: None
Optical Drive: None Standard
One of the following depending on Model
HP Slim SATA DVD RW Optical Drive (standard on Performance Models)
NOTE: The Optical Drive option is not available when you upgrade with the additional 8 SFF drive cage, or in the LFF Models.
Hard Drives: None Standard
Hard Drive Bays: Standard (8) small form factor (SFF) hot-plug drive bays to support Serial-attached SCSI (SAS) and Serial ATA (SATA) drives

- Optional second drive cage for additional (8) SFF drive bays (total 16)
- Optional cage for (6) Large Form Factor SAS/SATA hard drive bays

*Standard Features*

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| **Maximum Internal Storage** | Hot Plug SFF SAS | 16TB | 16 x 1TB (with optional SFF drive cage) |
| | Hot Plug LFF SAS | 18TB | 6 x 3TB (with optional LFF drive cage) |
| | Hot Plug SFF SAS SSD | 12.8TB | 16 x 800GB (with optional SFF drive cage) |
| | Hot Plug LFF SATA SSD | 2.4TB | 6 x 400GB (with optional LFF drive cage) |
| | Hot Plug SFF SATA SSD | 6.4TB | 16 x 400GB (with optional SFF drive cage) |

| | | |
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| **Interfaces** | Serial | 1 |
| | Video | 2 (1 front, 1 back) |
| | Network RJ-45 (Ethernet) | 4 |
| | iLO3 remote management port | 1 |
| | Keyboard | 1 |
| | Pointing Device (Mouse) | 1 |
| | Graphics | 1 |
| | USB 2.0 Ports | 6 (2 front, 2 back, 2 inside - one for internal tape) |

**Industry Standard Compliance**

ACPI 2.0 Compliant
PCIe 2.0 Compliant
PCI 2.2 Compliant
WOL Support
Microsoft® Logo certifications
USB 2.0 Support

**Server Power Cords**

NOTE: If customers require a local power cord, they can check the power cord matrix for the appropriate county specific sku. Please see the following power cord matrix for details: http://www.hp.com/go/powercordmatrix

**Common Slot ProLiant**

HP has a new design for ProLiant power. The new Common Slot Power Supply bay. This design provides the customer with commonality in power supplies across multiple platforms to save on the cost of spares and allows HP to offer multiple power solutions to fit the customers' needs. Many HP ProLiant Servers come with Common Slot, High Efficiency power supplies that allow you to right-size power supplies for your server configuration. Common Slot (CS) designates commonality of the power supply across multiple ProLiant servers. HP's new Common Slot power supplies are designed for highest efficiency to provide power efficiency without degrading performance of the ProLiant. Power Supplies will have efficiency ratings up to 94%. There are three power wattage options to choose from - 460W, 750W, and 1200W - depending on the configuration of your server. To make sure you select the correct power supply to meet your configuration, we suggest that you use the HP Power Advisor (www.hp.com/go/hppoweradvisor) to decide the "Right-Size" for your configuration. All HP Common Slot power sources are UL, CE Mark Compliant, Hot Plug and Redundant.

It is highly recommended that you use the HP Power Calculator in defining the "Right-Size" power supply for your needs.
HP's ProLiant Common Slot Power supplies (460W & 750W) meet multiple Energy Efficiency Initiatives including Climate Savers Computing Initiative GOLD, ECOS Consulting 80PLUS GOLD, and plans on offering models that meet the Energy Star for Server requirements when they are published.

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| | HP's ProLiant Common Slot Power supplies (1200W, 750W & 460W) meet multiple Energy Efficiency Initiatives including Climate Savers Computing Initiative Platinum and ECOS Consulting 80PLUS Platinum Power Supply requirements.<br><br>Redundant Power: Optional (1+ 1 or n+n redundant) power supplies can be purchased through power supply option kits (see Redundant Options for part numbers).<br><br>NOTE: Pre-Configured Performance models include two power supplies; Pre-Configured Base and Entry models include one power supply. On CTO models, power supply must be selected from available options. |
| System Fans | Hot plug fans ship standard, N+1 fully redundant<br>(3+1) for 1 processor, (5+1) for 2 processors<br>NOTE: Processor option kits include 2 additional fans when upgrading to 2 processors. |
| Required Cabling | For required cabling information, refer to the HP Web site at: www.hp.com/servers/dl385-g7 |
| Operating Systems and Virtualization Software Support for ProLiant Servers | Microsoft Windows Server<br>Red Hat Enterprise Linux (RHEL)<br>SUSE Linux Enterprise Server (SLES)<br>Oracle Solaris<br>VMware<br>Citrix XenServer<br>NOTE: For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: http://www.hp.com/go/ossupport |
| Graphics | Integrated ATI ES1000, 64MB video standard<br><br>• 16 bit color: maximum resolution of 1600 x 1200<br>• 32 bit color: maximum resolution of 1280 x 1024<br><br>NOTE: Maximum resolution available via iLO3 remote console is 1280 x 1024 (for 32 bit color) and 1600 x 1200 (DVR max resolution). |
| Form Factor | Rack (2U), (3.5-inch) |
| HP Insight management software | HP Service Pack for ProLiant — HP Service Pack for ProLiant is an enhanced, re-packaging of ProLiant systems software and firmware, but is still based on the rich legacy of ProLiant Support Packs (PSPs) and HP Smart Update Firmware DVD that are originally found in the Insight Foundation suite for ProLiant. It is a comprehensive systems software and firmware release offered as a tested solution on all ProLiant servers supported by Insight Foundation version 8.70. It evolves beyond separate installation of HP PSPs and the HP Smart Update Firmware DVD by providing a single image that combines both of |

these products. It offers combined firmware and systems software packaging and improved processes for drivers, utilities, agents, non agents, and other utilities that are required to keep pace in today's rapidly expanding technology infrastructure.

Main or base releases for HP Service Pack for ProLiant are planned approximately 3 times a year, but look for interim update releases that will capture hot fixes released between main releases. HP Service Pack for ProLiant is supported on all HP ProLiant SL/ML/DL 100, 300, 500, 700, and 900 servers and BladeSystems series servers that are supported with Insight Foundation version 8.70 and will supersede and replace Insight Foundation. It is downloadable from: www.hp.com/go/server/service_packs/updates as a web only release and is not available on media.

The first release of HP Service Pack for ProLiant is Version 2011.06.0. It contains the first comprehensive collection of firmware and system software components, all tested together that include drivers, agents, non-agents, utilities, firmware packages for servers, controllers, storage, blades, enclosures, and all components and options supported by HP ProLiant Support Packs for Windows and Linux version 8.70. Additionally, VMware offline firmware updates will be included.

More information can be found at this link for HP Service Pack for ProLiant: www.hp.com/go/server/service_packs

HP Insight Foundation

Insight Foundation is being baselined at version v8.70 which means the following:

- Its Media Kit (contains 2 SmartStart CDs, the Firmware DVD, and the Management DVD) will continue to ship with all supported ProLiant G7 or earlier BTO servers until the last supported server is no longer shipping.
- The Media Kit will not be updated past version 8.70.
- ProLiant G7 or earlier CTO servers are able to order the Media Kit with the understanding that the media is not updated. Please check specific server QuickSpecs for availability of CTO Kit.
- PSP and Firmware DVD downloads will be updated through 2Q 2012 at the HP Insight Foundation Suite for ProLiant downloads tab: http://www.hp.com/go/foundation

Customers are urged to use the replacement product, HP Service Pack for ProLiant, instead of Insight Foundation Suite which is found at these location:

- www.hp.com/go/spp
- www.hp.com/go/spp/download

HP Integrated Lights-Out (iLO) for ProLiant

HP Integrated Lights-Out (iLO) simplifies server setup, health monitoring, power and thermal control, and lights-out remote administration of ProLiant ML, DL, and BL servers. HP iLO functions without additional software and can be accessed from any location via a web browser. HP iLO works hand-in-hand with HP Systems Insight Manager, Insight Control, and Insight Dynamics for ProLiant, helping customers unleash the value of the ProLiant platform and deliver the highest possible quality of IT service. For more information, visit: www.hp.com/go/iLO

*Standard Features*

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|---|---|
| **Intelligent Manageability** | HP Systems Insight Manager software<br>SmartStart<br>Management Agent<br>Redundant ROM<br>Remote Flash ROM<br>ROM-Based Setup Utility (RBSU)<br>Integrated Management Log<br>Automatic Server Recovery (ASR)<br>Dynamic Sector Repairing (with Smart Array controller)<br>Drive Parameter Tracking (with Smart Array controller)<br>Pre-Failure Warranty (covers processors, SAS hard drives and memory) |
| **Security** | Power-on password<br>Keyboard password<br>QuickLock, Network Server Mode<br>Serial interface control<br>Administrator's password |
| **Warranty** | This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.<br>NOTE: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have HP replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:<br>http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html |

*Optional Features*

| | | |
|---|---|---|
| **HP Insight management software** | HP Insight Control | HP Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console.<br><br>Two versions of Insight Control are available, to serve environments requiring either a Linux-based or a Windows-based central management server: HP Insight Control for Linux, and HP Insight Control. See www.hp.com/go/insightcontrol<br><br>HP Insight Control includes one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, please visit: http://www.hp.com/services/insight. |
| | HP Insight Dynamics for ProLiant | HP Insight Dynamics for ProLiant, a product option, is advanced infrastructure management software that enables IT staff to instantly adjust their environments to meet dynamic business demands by provisioning, optimizing and protecting complex infrastructure in minutes. It's a powerful toolkit, integrated-by-design, that accelerates complex technology projects and simplifies daily operations, transforming data center economics. With Insight Dynamics IT professionals can plan capacity and power continuously, balance workloads across physical and virtual resources, and ensure cost-effective high availability. It also enables IT organizations to provision infrastructure consistently and automatically from pools of shared resources using a self-service portal. Resources provisioned can range from a single virtual machine to complex multi-tier environments and their associated physical and virtual resource requirements. In addition to the previous functional benefits, it also provides a cost-effective disaster recovery for physical and virtual environments that works with HP Continuous Access software for both the Enterprise Virtual Array and the XP storage array allowing application environments to be reactivated in minutes with the touch of a button to a remote location.<br><br>NOTE: For more information, visit: http://www.hp.com/go/insightdynamics |

*Optional Features*

| | | |
|---|---|---|
| High Performance Clusters | HP Cluster Platforms | HP Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPC Server. A Cluster Platform Configurator simplifies ordering. http://www.hp.com/go/clusters. |
| | HP HPC Interconnects | High Performance Computing (HPC) interconnect technologies are available for this server as part of the HP Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by HP when integrated within an HP cluster. Flexible, validated solutions can be defined with the help of configuration tools. http://www.hp.com/techservers/clusters/ucp/index.html |
| | HP Cluster Management Utility | HP Cluster Management Utility (CMU) is an HP-licensed and HP-supported suite of tools that are used to manage large-scale Linux ProLiant systems. CMU includes software for the centralized provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective. http://www.hp.com/go/cmu |
| | HP HPC Linux Value Pack | HP HPC Linux Value Pack (Value Pack) is an HP-licensed and HP-supported specially priced software bundle for the development and deployment of applications on HPC Cluster Platforms. Value Pack includes the Platform HPC Enterprise Edition suite of tools including the LSF workload scheduler, the HP-MPI parallelization library. Also included are the HP Unified Parallel C compiler and the HP Shmem library, as well as the execution environments for the libraries and compiler. HP HPC Linux Value Pack |

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**Factory Express Portfolio for Servers and Storage**

HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to: http://www.hp.com/go/factory-express.

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**HP Enterprise Configurator**

The HP eConfigure-Enterprise Configurator now provides factory default racking for our HP hardware portfolio. This approach is aligned with our strategic direction to meet the needs and expectations of our valued customers. If you require "custom" rack configuration, please contact HP's Customer Business Center or an Authorized Partner for assistance. http://www.hp.com/products/configurator.

Service and Support

HP Technology Services for Industry Standard Servers and BladeSystem

Capitalizing on HP ProLiant server and HP BladeSystem capabilities requires a service partner who understands your increasingly complex business technology environment. That's why it makes sense to team up with the people who know HP infrastructure hardware and software best - the experienced professionals at HP Services.

What HP ProLiant and BladeSystem Services can do for you

HP ProLiant and BladeSystem Services can help you design, deploy, test, integrate, support, and manage IT and infrastructure solutions. This way, HP proposes services solutions that include more than just uplift of base warranty. You can get the support you need by choosing from one of a number of service packaged solutions we have designed to address wider set of customer support needs:.

HP Technology Services meets business challenges with services offered in three packages - Optimized Care Package, Standard Care Package, and Basic Care Package - available for each product group. Such packaged solutions enable customers to optimize technology operations, minimize risk and drive better business outcomes with easy-to-buy, easy-to-use scalable support packages for servers, storage, networking and software.

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Optimized Care

Optimized Care Package: Supports maintaining servers at optimum performance availability

HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN

HP Installation and Startup for Insight Control Software

Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-9972ENW.pdf

3-Year HP Critical Advantage

Provides end-to-end infrastructure support solution for business critical applications running on virtualized/x86 infrastructures, enabling the customers to cost effectively build, operate, and continuously improve their IT environment
http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA3-1772ENW

Additional Services: Microsoft or Linux or VMware education courses + Facility & technology environmental assessment services + Energy Efficiency Design, Factory Express

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*Service and Support*

| | |
|---|---|
| Standard Care | Standard Care Package: Package that maintains high level of server availability<br><br>HP ProLiant Server Hardware Installation<br>Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN<br><br>HP Installation and Startup for Insight Control Software<br>Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-9972ENW.pdf<br><br>3-Year HP 6 hour Hardware Support Onsite Call-to-Repair Service<br>Provides an IT manager with a team of support specialists who will quickly begin troubleshooting the system to help return the hardware to operating condition within 6 hours of the initial service request to the HP Global Solution Center<br>http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EN.pdf<br><br>3-Year , HP 24x7 Software Support for Insight Control<br>Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers<br>http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6645EEE.pdf<br><br>Additional Services: Software OS (Microsoft, Linux (SUSE/Red Hat) & VMware Installation & Start Up, and Software Support; Install and Startup Services for Insight Control; Microsoft or Linux or VMware education courses; +30 Proactive Select Credits, Factory Express |
| Basic Care | Basic Care Package: delivers minimum recommended support service level<br><br>HP ProLiant Server Hardware Installation<br>Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner<br>http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN<br><br>3-Year HP 24x7 4 hour Response, Hardware Support Onsite Service<br>Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers<br>http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-9972ENW.pdf<br><br>Additional Services: Software OS (Microsoft, Linux (SUSE/Red Hat) & VMware Installation & Start Up and Software Support); +10 Proactive Select Credits, Factory Express |
| Insight Remote Support | The packages include HP Insight Remote Support that uses proven technology to deliver secure, reliable 24x7 remote monitoring, diagnoses, and problem resolution. It is available at no additional cost to all warranty, HP Care Pack Service, and service agreement customers. |
| For more information | To learn more on HP ProLiant servers and HP BladeSystem servers, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: http://www.hp.com/services/proliant |

*Pre-configured Models*

NOTE: For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.
NOTE: Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.
NOTE: HP does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.
NOTE: If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.
NOTE: Not all models are available in all regions. Check with your local country HP offices for availability.
NOTE: DL385 G7 chassis has 24 DIMM slots available.

## Performance Models

| | | |
|---|---|---|
| HP ProLiant DL385 G7 6282SE 64GB-R Hot Plug SATA SFF 750W PS Server<br>654841-xx1 | Processor(s) | (2) AMD Opteron™ 6282SE (2.6GHz/16-core/16MB/140W) Processors |
| | Cache Memory | 16MB L3 cache |
| | Memory | 64GB (8 x 8GB) PC3-10600R (DDR3-1333) Registered DIMMs |
| | Network Controller | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | Storage Controller | HP Smart Array P410i/1GB FBWC Controller |
| | Hard Drive | None ship standard |
| | Internal Storage | Standard: 8 SFF SAS/SATA HDD Bays |
| | Optical Drive | Slim SATA DVD-RW Optical Drive |
| | Power Supply | (2) HP 750W Common Slot Platinum Hot Plug Power Supplies |
| | Fans | 6 Hot Plug Fully Redundant Fans |
| | Insight Control | HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates |
| | Form Factor | Rack (2U), (3.5-inch) |
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |

| | | |
|---|---|---|
| HP ProLiant DL385 G7 6174 2P 16GB-R P410i/1GB FBWC 8 SFF 750W RPS Perf IC Sever<br>573087-xx1 | Processor(s) | (2) AMD Opteron™ 6174 (2.2GHz/12-core/12MB/80W) Processors |
| | Cache Memory | 12MB L3 cache |
| | Memory | 16GB (8 x 2GB) PC3-10600R (DDR3-1333) Registered DIMMs |
| | Network Controller | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | Storage Controller | HP Smart Array P410i/1GB FBWC Controller |
| | Hard Drive | None ship standard |
| | Internal Storage | Standard: 8 SFF SAS/SATA HDD Bays |
| | Optical Drive | Slim SATA DVD-RW Optical Drive |
| | Power Supply | (2) HP 750W Common Slot Gold Hot Plug Power Supplies |
| | Fans | 6 Hot Plug Fully Redundant Fans |
| | Insight Control | HP Insight Control, No Media, single server license, including 1 year of 24x7 Technical Support and Updates |
| | Form Factor | Rack (2U), (3.5-inch) |

*Pre-configured Models*

| | | |
|---|---|---|
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |

| | | |
|---|---|---|
| HP ProLiant DL385 G7 6180SE 2P 16GB-R P410i/1GB FBWC SFF 750W RPS IC Server 636071-xx1 | Processor(s) | (2) AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/105W) Processors |
| | Cache Memory | 12MB L3 cache |
| | Memory | 16GB (8 x 2GB) PC3-10600R (DDR3-1333) Registered DIMMs |
| | Network Controller | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | Storage Controller | HP Smart Array P410i/1GB FBWC Controller |
| | Hard Drive | None ship standard |
| | Internal Storage | Standard: 8 SFF SAS/SATA HDD Bays |
| | Optical Drive | Slim SATA DVD-RW Optical Drive |
| | Power Supply | (2) HP 750W Common Slot Gold Hot Plug Power Supplies |
| | Fans | 6 Hot Plug Fully Redundant Fans |
| | Insight Control | HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates |
| | Form Factor | Rack (2U), (3.5-inch) |
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |

## Base Models

| | | |
|---|---|---|
| HP ProLiant DL385 G7 6274 32GB-R Hot Plug SFF 460W PS Server 654853-xx1 | Processor(s) | (2) AMD Opteron™ 6274 (2.2GHz/16-core/16MB/115W) Processor |
| | Cache Memory | 16MB L3 cache |
| | Memory | 32GB (4 x 8GB) PC3-10600R (DDR3-1333) Registered DIMMs |
| | Network Controller | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | Storage Controller | HP Smart Array P410i/512MB FBWC Controller |
| | Hard Drive | None ship standard |
| | Internal Storage | Standard: 8 SFF SAS/SATA HDD Bays |
| | Optical Drive | Not included on Base model |
| | Power Supply | (1) 460W Common Slot Platinum Hot Plug Power Supply |
| | Fans | 6 hot plug redundant fans |
| | Form Factor | Rack (2U), (3.5-inch) |
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |

| | | |
|---|---|---|
| HP ProLiant DL385 G7 6238 16GB-R Hot Plug SFF 460W PS Server 654856-xx1 | Processor(s) | (2) AMD Opteron™ 6238 (2.6GHz/12-core/16MB/115W) Processor |
| | Cache Memory | 16MB L3 cache |
| | Memory | 16GB (4 x 4GB) PC3-10600R (DDR3-1333) Registered DIMMs |
| | Network Controller | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |

*Pre-configured Models*

| | | |
|---|---|---|
| | Storage Controller | HP Smart Array P410i/512MB FBWC Controller |
| | Hard Drive | None ship standard |
| | Internal Storage | Standard: 8 SFF SAS/SATA HDD Bays |
| | Optical Drive | Not included on Base model |
| | Power Supply | (1) 460W Common Slot Platinum Hot Plug Power Supply |
| | Fans | 6 hot plug redundant fans |
| | Form Factor | Rack (2U), (3.5-inch) |
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |
| HP ProLiant DL385 G7 6172 1P 8GB-R P410i/256 8 SFF 460W PS Base Server 573088-xx1 | Processor(s) | (1) AMD Opteron™ 6172 (2.1GHz/12-core/12MB/80W) Processor |
| | Cache Memory | 12MB L3 cache |
| | Memory | 8GB (4 x 2GB) PC3-10600R (DDR3-1333) Registered DIMMs |
| | Network Controller | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | Storage Controller | HP Smart Array P410i/256MB Controller |
| | Hard Drive | None ship standard |
| | Internal Storage | Standard: 8 SFF SAS/SATA HDD Bays |
| | Optical Drive | Not included on Base Model |
| | Power Supply | (1) 460W Common Slot Gold Hot Plug Power Supply |
| | Fans | 4 hot plug redundant fans |
| | Form Factor | Rack (2U), (3.5-inch) |
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |
| HP ProLiant DL385 G7 6176 1P 8GB-R P410i/256 SFF 460W PS Server 636075-xx1 | Processor(s) | (1) AMD Opteron™ 6176 (2.3GHz/12-core/12MB/80W) Processor |
| | Cache Memory | 12MB L3 cache |
| | Memory | 8GB (4 x 2GB) PC3-10600R (DDR3-1333) Registered DIMMs |
| | Network Controller | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | Storage Controller | HP Smart Array P410i/256MB Controller |
| | Hard Drive | None ship standard |
| | Internal Storage | Standard: 8 SFF SAS/SATA HDD Bays |
| | Optical Drive | Not included on Base model |
| | Power Supply | (1) 460W Common Slot Gold Hot Plug Power Supply |
| | Fans | 4 hot plug redundant fans |
| | Form Factor | Rack (2U), (3.5-inch) |
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |
| HP ProLiant DL385 G7 | Processor(s) | (1) AMD Opteron™ 6136 (2.4GHz/8-core/12MB/80W) Processor |

*Pre-configured Models*

| | | |
|---|---|---|
| 6136 1P 8GB-R P410i/256 Hot Plug 1 SFF 460W PS Base Server 585335-xx1 | Cache Memory | 12MB L3 cache |
| | Memory | 8GB (4 x 2GB) PC3-10600R (DDR3-1333) Registered DIMMs |
| | Network Controller | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | Storage Controller | HP Smart Array P410i/256MB Controller |
| | Hard Drive | None ship standard |
| | Internal Storage | Standard: 8 SFF SAS/SATA HDD Bays |
| | Optical Drive | Not included on Base model |
| | Power Supply | (1) 460W Common Slot Gold Hot Plug Power Supply |
| | Fans | 4 hot plug redundant fans |
| | Form Factor | Rack (2U), (3.5-inch) |
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |

## Entry Models

| | | |
|---|---|---|
| HP ProLiant DL385 G7 6128 1P 4GB-R P410i/ZM 8 SFF 460W PS Entry Server 573089-xx1 | Processor(s) | (1) AMD Opteron™ 6128 (2.0GHz/8-core/12MB/80W) Processor |
| | Cache Memory | 12MB L3 cache |
| | Memory | 4GB (2 x 2GB) PC3-10600R (DDR3-1333) Registered DIMMs |
| | Network Controller | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | Storage Controller | HP Smart Array P410i/Zero Memory Controller |
| | Hard Drive | None ship standard |
| | Internal Storage | Standard: 8 SFF SAS/SATA HDD Bays |
| | Optical Drive | Not included on Entry model |
| | Power Supply | (1) 460W Common Slot Gold Hot Plug Power Supply |
| | Fans | 4 hot plug redundant fans |
| | Form Factor | Rack (2U), (3.5-inch) |
| | Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |

*Pre-configured Models*

## High Efficiency Models

| | | |
|---|---|---|
| **HP ProLiant DL385 G7 6128HE 1P 4GB-U P410i/ZM 8 SFF 460W PS Efficiency Server** 573090-xx1 | **Processor(s)** | (1) AMD Opteron™ 6128HE (2.0GHz/8-core/12MB/65W) Processor |
| | **Cache Memory** | 12MB L3 cache |
| | **Memory** | 4GB (2 x 2GB) PC3-10600 (DDR3-1333) Unbuffered DIMMs |
| | **Network Controller** | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | **Storage Controller** | HP Smart Array P410i/Zero Memory Controller |
| | **Hard Drive** | None ship standard |
| | **Internal Storage** | Standard: 8 SFF SAS/SATA HDD Bays |
| | **Optical Drive** | Not Included on HE model |
| | **Power Supply** | (1) 460W Common Slot Platinum Hot Plug Power Supply |
| | **Fans** | 4 hot plug redundant fans |
| | **Form Factor** | Rack (2U), (3.5-inch) |
| | **Warranty** | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |

| | | |
|---|---|---|
| **HP ProLiant DL385 G7 6132HE 4GB-U P410i/ZM 8 SFF 460W 94 EFF PS Server** 636076-xx1 | **Processor(s)** | (1) AMD Opteron™ 6132HE (2.2GHz/8-core/12MB/65W) Processor |
| | **Cache Memory** | 12MB L3 cache |
| | **Memory** | 4GB (2 x 2GB) PC3-10600 (DDR3-1333) Unbuffered DIMMs |
| | **Network Controller** | Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total) |
| | **Storage Controller** | HP Smart Array P410i/Zero Memory Controller |
| | **Hard Drive** | None ship standard |
| | **Internal Storage** | Standard: 8 SFF SAS/SATA HDD Bays |
| | **Optical Drive** | Not Included on HE model |
| | **Power Supply** | (1) 460W Common Slot Platinum Hot Plug Power Supply |
| | **Fans** | 4 hot plug redundant fans |
| | **Form Factor** | Rack (2U), (3.5-inch) |
| | **Warranty** | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |

| | | |
|---|---|---|
| **Country Code Key** | xx = 00 | U.S. |
| | xx = 20 | Brazil |
| | xx = 29 | Japan |
| | xx = 37 | APD |
| | xx = 42 | Europe |
| | xx = AA | PRC |

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.
NOTE: Configure-to-order (CTO) servers must start with a CTO Chassis.
NOTE: FIO indicates that this option is only available as a factory installable option.

## Step 1: Base Configuration (choose one of the following configurable models)

HP Models

HP ProLiant DL385 G7 SFF Configure-to-order Server — 573122-B21

Factory Integrated Model ships with:

(8) SFF Serial Attached SCSI (SAS) Drive Bays
Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total)
HP Smart Array P410i/Zero Memory Controller
PCI-Express Riser Cage
One IEC Power cord
Hot plug fans (fully redundant)
NOTE: 4 fans one processor models; 6 fans two processor models
Rack (2U), (3.5-inch)

HP ProLiant DL385 G7 LFF Configure-to-order Server — 573123-B21

Factory Integrated Model ships with:

(6) LFF Serial Attached SCSI (SAS) Drive Bays
NOTE: LFF configuration does not support internal optical drive
Two HP NC382i Dual Port Multifunction Gigabit Server Adapters (four ports total)
HP Smart Array P410i/Zero Memory Controller
PCI-Express Riser Cage
One IEC Power cord
Hot plug fans (fully redundant)
NOTE: (4 fans one processor models; 6 fans two processor models)
Rack (2U), (3.5-inch)
NOTE: This option removes the optical media bay and 8 SFF drive bays

## Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

HP Processors

NOTE: If two processors are desired, select one xxxxxx-L21 and one xxxxxx-B21.

Sixteen-Core Processors

| | |
|---|---|
| HP DL385 G7 AMD Opteron™ 6282SE (2.60GHz/16-core/16MB/140W) FIO Processor Kit | 654868-L21 |
| HP DL385 G7 AMD Opteron™ 6276 (2.30GHz/16-core/16MB/115W) FIO Processor Kit | 654862-L21 |
| HP DL385 G7 AMD Opteron™ 6274 (2.20GHz/16-core/16MB/115W) FIO Processor Kit | 654870-L21 |
| HP DL385 G7 AMD Opteron™ 6272 (2.10GHz/16-core/16MB/115W) FIO Processor Kit | 654864-L21 |
| HP DL385 G7 AMD Opteron™ 6262HE (1.60GHz/16-core/16MB/85W) FIO Processor Kit | 654866-L21 |

Twelve-Core Processors

| | | |
|---|---|---|
| | HP DL385 G7 AMD Opteron™ 6238 (2.60GHz/12-core/16MB/115W) FIO Processor Kit | 654872-L21 |
| | HP DL385 G7 AMD Opteron™ 6234 (2.40GHz/12-core/16MB/115W) FIO Processor Kit | 657455-L21 |
| | HP DL385 G7 AMD Opteron™ 6180SE (2.50GHz/12-core/12MB/140W) FIO Processor Kit | 636080-L21 |
| | HP DL385 G7 AMD Opteron™ 6176SE (2.30GHz/12-core/12MB/140W) FIO Processor Kit | 585322-L21 |
| | HP DL385 G7 AMD Opteron™ 6176 (2.30GHz/12-core/12MB/115W) FIO Processor Kit | 636082-L21 |
| | HP DL385 G7 AMD Opteron™ 6174 (2.20GHz/12-core/12MB/115W) FIO Processor Kit | 585320-L21 |
| | HP DL385 G7 AMD Opteron™ 6172 (2.10GHz/12-core/12MB/115W) FIO Processor Kit | 585324-L21 |
| | HP DL385 G7 AMD Opteron™ 6166HE (1.80GHz/12-core/12MB/85W) FIO Processor Kit | 636086-L21 |
| | Eight-Core Processors | |
| | HP DL385 G7 AMD Opteron™ 6220 (3.0GHz/8-core/16MB/115W) FIO Processor Kit | 663496-L21 |
| | HP DL385 G7 AMD Opteron™ 6212 (2.60GHz/8-core/16MB/115W) FIO Processor Kit | 663498-L21 |
| | HP DL385 G7 AMD Opteron™ 6140 (2.60GHz/8-core/12MB/115W) FIO Processor Kit | 636084-L21 |
| | HP DL385 G7 AMD Opteron™ 6136 (2.40GHz/8-core/12MB/115W) FIO Processor Kit | 585326-L21 |
| | HP DL385 G7 AMD Opteron™ 6134 (2.30GHz/8-core/12MB/115W) FIO Processor Kit | 585328-L21 |
| | HP DL385 G7 AMD Opteron™ 6128 (2.0GHz/8-core/12MB/115W) FIO Processor Kit | 585330-L21 |
| | HP DL385 G7 AMD Opteron™ 6132HE (2.20GHz/8-core/12MB/85W) FIO Processor Kit | 636088-L21 |
| | HP DL385 G7 AMD Opteron™ 6128HE (2.0GHz/8-core/12MB/85W) FIO Processor Kit | 585332-L21 |
| | Quad-Core Processors | |
| | HP DL385 G7 AMD Opteron™ 6204 (3.30GHz/4-core/16MB/115W) FIO Processor Kit | 671931-L21 |
| HP Memory | NOTE: DIMM banks are active only when the corresponding processor socket is populated. | |
| | Registered DIMMs (RDIMMs) | |
| | HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit | 593907-B21 |
| | HP 4GB (1x4GB) Single Rank x4 PC3-12800 (DDR3-1600) Registered CAS-11 Memory Kit | 676331-B21 |
| | HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit | 593911-B21 |

| | | |
|---|---|---|
| | HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit | 604500-B21 |
| | HP 8GB (1x8GB) Single Rank x4 PC3-12800 (DDR3-1600) Registered CAS-11 Memory Kit | 676333-B21 |
| | HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit | 593913-B21 |
| | HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit | 604502-B21 |
| | HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 684066-B21 |
| | HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit | 593915-B21 |
| | HP 16GB (1x16GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 LP Memory Kit | 627808-B21 |
| | HP 32GB (1x32GB) Quad Rank x4 PC3L-8500 (DDR3-1066) Registered CAS-7 LP Memory Kit | 627810-B21 |
| | Unbuffered with ECC DIMMs (UDIMMs) | |
| | HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Unbuffered CAS-9 Memory Kit | 593921-B21 |
| | HP 4GB (1x4GB) Dual Rank x8 PC3-10600 (DDR3-1333) Unbuffered CAS-9 Memory Kit | 593923-B21 |
| | NOTE: PC3L is a low voltage memory | |
| HP Power Supplies | NOTE: Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at: www.hp.com/go/hppoweradvisor. | |
| | HP 460W Common Slot Gold Hot Plug Power Supply Kit | 503296-B21 |
| | HP 460W Common Slot Platinum Hot Plug Power Supply Kit | 593188-B21 |
| | HP 750W Common Slot Gold Hot Plug Power Supply Kit | 512327-B21 |
| | HP 750W Common Slot Platinum Hot Plug Power Supply Kit | 593831-B21 |
| | HP 1200W Common Slot Platinum Hot Plug Power Supply Kit | 578322-B21 |
| | HP 1200W Common Slot -48VDC Hot Plug Power Supply Kit | 437573-B21 |
| | NOTE: DC power supplies contain a -48V DC power cord designed for in rack DC power rectifiers. | |

## Step 3: Choose Additional Factory Integratable Options

| | | |
|---|---|---|
| HP Storage Controllers | HP Smart Array P212/256 BBWC 1-ports Int/1-ports Ext PCIe x8 FIO SAS Controller | 491191-B21 |
| | HP Smart Array P410/ZM 2-ports Int PCIe x8 FIO SAS Controller | 462860-B21 |
| | HP Smart Array P410/256 BBWC 2-ports Int PCIe x8 FIO SAS Controller | 491195-B21 |
| | HP Smart Array P411/256 BBWC 2-ports Ext PCIe x8 FIO SAS Controller | 491193-B21 |
| HP Performance Packs | HP ProLiant DL385 G7 Performance models include the latest performance technologies and enterprise class availability features pre-installed for convenience and value. Performance packs include a 2nd processor, two additional fans, 1G/FBWC, a second 750W CS HE power supply and Insight Control (ICE) license. To complete the configuration of a Performance model, select the Slim SATA DVD-RW Optical Drive Kit (481043-B21). | |
| | HP DL385 G7 6174 High Performance Model FIO Performance Pack | 585334-B21 |
| | HP DL385 G7 6180SE FIO High Performance Pack | 636089-B21 |
| HP Insight Software | HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License | 582765-B21 |
| | HP Insight Control for Linux including 1yr 24x7 Support ML/DL Bundle 1 Server FIO License | TC203A |

## Step 4: Choose Additional Options for Factory Integration

NOTE: For additional options, please refer to the "Core Options" and "Additional Options" section below.

*Core Options*

NOTE: Some options may not be integrated at the factory. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for additional information.

| | | |
|---|---|---|
| HP Unique Options | HP RDX160 Removable Disk Backup System DL Server Module<br>NOTE: Mounts in DL385 G6 second drive cage slot (160GB of Disk Storage) | AP724A |
| | HP RDX320 Removable Disk Backup System DL Server Module<br>NOTE: 320GB of disk capacity per data cartridge.<br>NOTE: Mounts in DL385 G7 second drive cage slot (320GB of Disk Storage) | AP725A |
| | HP RDX500 Removable Disk Backup System DL Server Module<br>NOTE: 500GB of disk capacity per data cartridge.<br>NOTE: Mounts in DL385 G7 second drive cage slot (500GB of Disk Storage) | AP726A |
| | HP RDX1000 Removable Disk Backup System DL Server Module<br>NOTE: 1 TB of disk capacity per data cartridge.<br>NOTE: Mounts in DL385 G7 second drive cage slot (1 TB of Disk Storage) | BV848A |
| | HP DL385 G7 8 Small Form Factor (SFF) Drive Cage Kit | 607248-B21 |
| HP Processors | Sixteen-Core Processors | |
| | HP DL385 G7 AMD Opteron™ 6282SE (2.60GHz/16-core/16MB/140W) Processor Kit | 654868-B21 |
| | HP DL385 G7 AMD Opteron™ 6276 (2.30GHz/16-core/16MB/115W) Processor Kit | 654862-B21 |
| | HP DL385 G7 AMD Opteron™ 6274 (2.20GHz/16-core/16MB/115W) Processor Kit | 654870-B21 |
| | HP DL385 G7 AMD Opteron™ 6272 (2.10GHz/16-core/16MB/115W) Processor Kit | 654864-B21 |
| | HP DL385 G7 AMD Opteron™ 6262HE (1.60GHz/16-core/16MB/85W) Processor Kit | 654866-B21 |
| | Twelve-Core Processors | |
| | HP DL385 G7 AMD Opteron™ 6238 (2.60GHz/12-core/16MB/115W) Processor Kit | 654872-B21 |
| | HP DL385 G7 AMD Opteron™ 6234 (2.40GHz/12-core/16MB/115W) Processor Kit | 657455-B21 |
| | HP DL385 G7 AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/140W) Processor Kit | 636080-B21 |
| | HP DL385 G7 AMD Opteron™ 6176SE (2.3GHz/12-core/12MB/140W) Processor Kit | 585322-B21 |
| | HP DL385 G7 AMD Opteron™ 6176 (2.3GHz/12-core/12MB/115W) Processor Kit | 636082-B21 |
| | HP DL385 G7 AMD Opteron™ 6174 (2.2GHz/12-core/12MB/115W) Processor Kit | 585320-B21 |
| | HP DL385 G7 AMD Opteron™ 6172 (2.1GHz/12-core/12MB/115W) Processor Kit | 585324-B21 |
| | HP DL385 G7 AMD Opteron™ 6166HE (1.8GHz/12-core/12MB/85W) Processor Kit | 636086-B21 |
| | Eight-Core Processors | |
| | HP DL385 G7 AMD Opteron™ 6220 (3.0GHz/8-core/16MB/115W) Processor Kit | 663496-B21 |
| | HP DL385 G7 AMD Opteron™ 6212 (2.60GHz/8-core/16MB/115W) Processor Kit | 663498-B21 |
| | HP DL385 G7 AMD Opteron™ 6140 (2.6GHz/8-core/12MB/115W) Processor Kit | 636084-B21 |
| | HP DL385 G7 AMD Opteron™ 6136 (2.4GHz/8-core/12MB/115W) Processor Kit | 585326-B21 |
| | HP DL385 G7 AMD Opteron™ 6134 (2.3GHz/8-core/12MB/115W) Processor Kit | 585328-B21 |
| | HP DL385 G7 AMD Opteron™ 6128 (2.0GHz/8-core/12MB/115W) Processor Kit | 585330-B21 |
| | HP DL385 G7 AMD Opteron™ 6132HE (2.2GHz/8-core/12MB/85W) Processor Kit | 636088-B21 |

*Core Options*

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|---|---|---|
| | HP DL385 G7 AMD Opteron™ 6128HE (2.0GHz/8-core/12MB/85W) Processor Kit | 585332-B21 |
| | Quad-Core Processors | |
| | HP DL385 G7 AMD Opteron™ 6204 (3.30GHz/4-core/16MB/115W) Processor Kit | 671931-B21 |
| | NOTE: Second processor kits include additional two fans. | |
| HP Memory | NOTE: DIMM banks are active only when the corresponding processor socket is populated. | |
| | NOTE: For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator | |
| | Registered DIMMs (RDIMMs) | |
| | HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit | 593907-B21 |
| | HP 4GB (1x4GB) Single Rank x4 PC3-12800 (DDR3-1600) Registered CAS-11 Memory Kit | 676331-B21 |
| | HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit | 593911-B21 |
| | HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit | 604500-B21 |
| | HP 8GB (1x8GB) Single Rank x4 PC3-12800 (DDR3-1600) Registered CAS-11 Memory Kit | 676333-B21 |
| | HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit | 593913-B21 |
| | HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit | 604502-B21 |
| | HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 684066-B21 |
| | HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit | 593915-B21 |
| | HP 16GB (1x16GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 LP Memory Kit | 627808-B21 |
| | HP 32GB (1x32GB) Quad Rank x4 PC3L-8500 (DDR3-1066) Registered CAS-7 LP Memory Kit | 627810-B21 |
| | Unbuffered with ECC DIMMs (UDIMMs) | |
| | HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Unbuffered CAS-9 Memory Kit | 593921-B21 |
| | HP 4GB (1x4GB) Dual Rank x8 PC3-10600 (DDR3-1333) Unbuffered CAS-9 Memory Kit | 593923-B21 |
| | NOTE: PC3L is a low voltage memory | |

*Core Options*

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| **HP Optical Drives** | HP Slim 12.7mm SATA DVD-ROM Optical Drive | 481041-B21 |
| | HP Slim 12.7mm SATA DVD-RW Optical Drive<br>NOTE: Included in performance models. | 481043-B21 |
| | HP Mobile USB DVDRW Drive US | BU516AA#ABA |
| **HP Hard Drives** | NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.<br>NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details. | |
| | **SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives** | |
| | HP 900GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 619291-B21 |
| | HP 600GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 581286-B21 |
| | HP 450GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 581284-B21 |
| | HP 300GB 6G SAS 15K rpm SFF (2.5-inch) Hot Plug Enterprise 3 yr Warranty Hard Drive | 627117-B21 |
| | HP 300GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 507127-B21 |
| | HP 146GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 512547-B21 |
| | HP 146GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 507125-B21 |
| | HP 72GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 512545-B21 |
| | **SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives** | |
| | HP 600GB 6G SAS 15K rpm LFF (3.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 516828-B21 |
| | HP 450GB 6G SAS 15K rpm LFF (3.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 516816-B21 |
| | HP 300GB 6G SAS 15K rpm LFF (3.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive | 516814-B21 |
| | **SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives** | |
| | HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) Dual Port Midline 1yr Warranty Hard Drive | 605835-B21 |
| | HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) Dual Port Midline 1yr Warranty Hard Drive | 507610-B21 |
| | **SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives** | |
| | HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive | 625031-B21 |
| | HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) Dual Port Midline 1yr Warranty Hard Drive | 507616-B21 |
| | HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) Dual Port Midline 1yr Warranty Hard Drive | 507614-B21 |

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html (Worldwide)

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| **SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives** | |
| HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Hot Plug Midline 1yr Warranty Hard Drive | 625609-B21 |
| HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive | 507750-B21 |
| **SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives** | |
| HP 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive | 628059-B21 |
| HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive | 507632-B21 |
| HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive | 454146-B21 |
| HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive | 458928-B21 |
| **SATA Hot Plug LFF (3.5-inch) Entry (ETY) Drives** | |
| HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Entry 1yr Warranty Hard Drive | 571230-B21 |

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html (Worldwide)

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| **SATA Hot Plug 2.5" Enterprise Mainstream Solid State Drives** | |
| HP 400GB 3G SATA MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive | 636597-B21 |
| HP 200GB 3G SATA MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive | 636595-B21 |
| HP 100GB 3G SATA MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive | 636593-B21 |
| **SATA Hot Plug 3.5" Midline (MDL) Solid State Drives** | |
| HP 400GB 3G SATA MLC LFF (3.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive | 636611-B21 |
| HP 200GB 3G SATA MLC LFF (3.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive | 636609-B21 |
| HP 100GB 3G SATA MLC LFF (3.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive | 636607-B21 |

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13415_div/13415_div.html (Worldwide)

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| **6G SAS Hot Plug Enterprise Performance Solid State Drives** | |
| HP 400GB 6G SAS SLC SFF (2.5-inch) Enterprise Performance 3yr Warranty Solid State Drive | 632494-B21 |
| HP 200GB 6G SAS SLC SFF (2.5-inch) Enterprise Performance 3yr Warranty Solid State Drive | 632492-B21 |
| **6G SAS Hot Plug Enterprise Mainstream Solid State Drives** | |
| HP 800GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive | 632506-B21 |

*Core Options*

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| | HP 400GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive | 632504-B21 |
| | HP 200GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive | 632502-B21 |
| HP Networking | Gigabit Ethernet adapters | |
| | HP NC112T PCI Express Gigabit Server Adapter | 503746-B21 |
| | HP NC360T PCI-E Dual Port Gigabit Server Adapter | 412648-B21 |
| | NOTE: Customers wishing to install more than one HP NC360T PCI-E Dual Port Gigabit Server Adapter (P/N 412648-B21) in a DL385 G7 server shipped after 05/23/2011 must also order the HP DL38X (2) x8 PCI-E Riser Kit (P/N 494326-B21) (See "HP I/O Expansion Options" below). With this I/O expansion option kit, a DL385 G7 server can support up to three NC360T NICs (one NIC in slot 1 of the standard riser card that ships with the server and up to two NICs in slots 4 and 5 of on the HP DL38X (2) x8 PCI-E Riser). | |
| | HP NC365T 4-port Ethernet Server Adapter | 593722-B21 |
| | HP NC373F PCI-E Multifunction 1000SX Gigabit Svr Adapter | 394793-B21 |
| | HP NC373T PCI-E Multifunction Gigabit Server Adapter | 394791-B21 |
| | HP NC375T PCI Express Quad Port Gigabit Server Adapter | 538696-B21 |
| | HP NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter | 458492-B21 |
| | 10 Gigabit Ethernet adapters | |
| | NOTE: A minimum of two Gigabytes (2 GB) of server memory is required per each adapter. | |
| | NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. | |
| | HP NC522SFP Dual Port 10GbE Gigabit Server Adapter | 468332-B21 |
| | HP NC523SFP 10Gb 2-port Server Adapter | 593717-B21 |
| | HP NC550SFP Dual Port 10GbE Server Adapter | 581201-B21 |
| | HP NC552SFP 10Gb 2-port Ethernet Server Adapter | 614203-B21 |
| | NOTE: Please see the QuickSpecs for additional information: www.hp.com/go/ProLiantNICs. | |
| HP InfiniBand | HP InfiniBand 4X QDR ConnectX-2 PCIe G2 Dual Port HCA | 592520-B21 |
| | HP InfiniBand 4X DDR ConnectX-2 PCIe G2 Dual Port HCA | 592521-B21 |
| | QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA | 583211-B21 |
| | HP InfiniBand 4X DDR PCI-E 0 Memory Dual Port HCA | 483513-B21 |
| | NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/13078_div/13078_div.html | |

*Core Options*

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| HP I/O Expansion Options | HP DL38X G5p/G6/G7 PCI-E x16 Riser Kit | 494323-B21 |
| | HP DL38X (2) x8 PCI-E Riser Kit<br>NOTE: This riser card will support Qty 2 of 10Gbe NICs or can be used for 2 additional PCIe Gen2 cards.<br>NOTE: The shared network port is only supported in the secondary riser connection. | 494326-B21 |
| | HP DL385 G7 x8/2x4 PCI-E Riser Kit | 581783-B21 |
| | HP DL385 G7 PCI-X Riser Kit | 581785-B21 |
| HP Power Supplies | NOTE: Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at: www.hp.com/go/hppoweradvisor | |
| | HP 460W Common Slot Gold Hot Plug Power Supply Kit | 503296-B21 |
| | HP 460W Common Slot Platinum Hot Plug Power Supply Kit | 593188-B21 |
| | HP 750W Common Slot Gold Hot Plug Power Supply Kit | 512327-B21 |
| | HP 750W Common Slot Platinum Hot Plug Power Supply Kit | 593831-B21 |
| | HP 1200W Common Slot Platinum Hot Plug Power Supply Kit | 578322-B21 |
| | HP 1200W Common Slot -48VDC Hot Plug Power Supply Kit<br>NOTE: DC power supplies contain a -48V DC power cord designed for in rack DC power rectifiers. | 437573-B21 |

NOTE: Some options may not be integrated at the factory. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for additional information.

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| HP Insight Software | HP Insight Control | |
| | HP Insight Control including 1yr 24x7 Technical Support and Updates Electronic License | T9074BAE |
| | HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Electronic License | TC278AAE |
| | HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License | 452148-B22 |
| | HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Tracking License | TC275A |
| | NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.<br>NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.<br>NOTE: Licenses ship without media. The HP Insight Control Media Kit can be ordered separately, or can be downloaded at: http://www.hp.com/go/insightupdates.<br>NOTE: For additional license options please see the Insight Control QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html | |
| | HP Insight Control for Linux | |
| | HP Insight Control for Linux w/1yr 24x7 Supp ML/DL/SL Bundle Electronic 1 Svr LTU | TC203AAE |
| | HP Insight Control for Linux including 1yr 24x7 Support Electronic License | TC213AAE |
| | HP Insight Control for Linux including 1yr 24x7 Support Single Server License | TC209A |
| | HP Insight Control for Linux Media Kit<br>NOTE: Media pack DVD contains the ISO image for HP Insight Control for Linux, HP Systems Insight Manager, HP Insight Control power management, HP Insight Control virtual machine management, and an integrated installer. Servers must be acquired separately.<br>NOTE: Licenses ship without media. The Media Kit for Insight Control for Linux can be ordered separately, or can be downloaded at: http://www.hp.com/go/ic-linux (click on Download button).<br>NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single set of activation keys.<br>NOTE: For additional License Kits, including electronic licensing options, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/13019_div/13019_div.html | TC208A |
| | HP Integrated Lights-Out (iLO) Advanced | |
| | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Electronic License | TA850AAE |
| | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License | 512485-B21 |

*Additional Options*

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| | HP Insight Management Media Kit<br>NOTE: Insight Software DVD media without licenses. Contains HP Systems Insight Manager, HP Insight Control, HP Insight Dynamics, HP Insight Control for Microsoft System Center, and Virtual Connect Enterprise Manager software. Uses an integrated installer to perform quick and accurate software installation and updates.<br>NOTE: This license allows 1 server to be deployed and managed via HP iLO Advanced. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service.<br>NOTE: Electronic software is available in all countries except China and Japan. Customers in China and Japan should order the physical equivalent.<br>NOTE: For additional license kits, including electronic delivery options, please see the QuickSpecs at:<br>http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html | 436222-B21 |
| High Performance Clusters | HP Cluster Management Utility | |
| | HP Cluster Management Utility Flexible License<br>NOTE: This part number can be used to purchase one certificate for multiple licenses with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. | QL803A |
| | HP Cluster Management Utility Media<br>NOTE: Order a minimum of one license per cluster to purchase media including software and documentation, which will be delivered to the customer, and also licenses CMU management. No license key is delivered or required.<br>NOTE: For additional license kits please see the QuickSpecs at:<br>http://h18004.www1.hp.com/products/quickspecs/12612_div/12612_div.html | 433257-B21 |
| | HP HPC Linux Value Pack | |
| | HP High Performance Computing Linux Value Pack 1 Processor Flexible License<br>NOTE: This part number can be used to purchase one certificate for multiple licenses with a single activation key. Each license is for one socket (a.k.a. processor). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. | TC293B |
| | HP High Performance Computing Linux Value Pack Media Kit<br>NOTE: This part number can be used to purchase media including software and documentation, which will be delivered to the customer.<br>NOTE: For additional license kits please see the QuickSpecs at:<br>http://h18004.www1.hp.com/products/quickspecs/13485_div/13485_div.html | TC294A |
| HP Drive Cage Options | HP DL385 G7 8 Small Form Factor (SFF) Drive Cage Kit | 607248-B21 |

*Additional Options*

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| HP I/O Accelerator Options | HP 160GB Single Level Cell PCIe ioDrive for ProLiant Servers | 600278-B21 |
| | NOTE: A low-profile PCI bracket is included for use in low-profile slots. | |
| | HP 320GB Multi Level Cell PCIe ioDrive for ProLiant Servers | 600279-B21 |
| | NOTE: A low-profile PCI bracket is included for use in low-profile slots. | |
| | HP 320GB Single Level Cell PCIe ioDrive Duo for ProLiant Servers | 600281-B21 |
| | HP 640GB Multi Level Cell PCIe ioDrive Duo for ProLiant Servers | 600282-B21 |
| | HP 1.28TB Multi Level Cell PCIe IO Accelerator | 641027-B21 |
| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13587_div/13587_div.html (Worldwide) | |
| HP Security | HP Trusted Platform Module Option | 488069-B21 |
| | NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: www.hp.com/go/TPM. | |
| | NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment. | |
| | NOTE: The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss. | |
| HP Storage Controllers | SAS Controllers | |
| | HP Smart Array P212 Controller | |
| | HP Smart Array P212/ZM 1-ports Int/1-ports Ext PCIe x8 SAS Controller | 462828-B21 |
| | HP Smart Array P212/256 1-ports Int/1-ports Ext PCIe x8 SAS Controller | 462834-B21 |
| | HP Smart Array P410 Controller | |
| | HP Smart Array P410/256 2-ports Int PCIe x8 SAS Controller | 462862-B21 |
| | HP Smart Array P410/512 BBWC 2-ports Int PCIe x8 SAS Controller | 462864-B21 |
| | HP Smart Array P410/512 FBWC 2-ports Int PCIe x8 SAS Controller | 578230-B21 |
| | HP Smart Array P410/1G FBWC 2-ports Int PCIe x8 SAS Controller | 572532-B21 |
| | HP Smart Array P411 Controller | |
| | HP Smart Array P411/256 2-ports Ext PCIe x8 SAS Controller | 462830-B21 |
| | HP Smart Array P411/512 BBWC 2-ports Ext PCIe x8 SAS Controller | 462832-B21 |
| | HP Smart Array P411/512 FBWC 2-ports Ext PCIe x8 SAS Controller | 578229-B21 |
| | HP Smart Array P411/1G FBWC 2-ports Ext PCIe x8 SAS Controller | 572531-B21 |
| | HP Smart Array P812 Controller | |
| | HP Smart Array P812/1G FBWC 2-ports Int/4-ports Ext PCIe x8 SAS Controller | 487204-B21 |
| | Optional Upgrades | |

*Additional Options*

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| HP 256MB P-series Cache Upgrade<br>NOTE: Supported on HP Smart Array P212 Controller and HP Smart Array P410/Zero Memory Controller only. | 462968-B21 |
| HP 512MB P-Series Battery Backed Write Cache Upgrade | 462967-B21 |
| HP 650 mAh P-Series Battery<br>NOTE: To enable BBWC on the 256MB cache. | 462969-B21 |
| HP 512MB Flash Backed Write Cache | 534916-B21 |
| HP 1GB Flash Backed Cache | 534562-B21 |
| HP Chipset SATA Cable Kit<br>NOTE: This cable allows for connection of Chipset SATA to 1 SATA HD in the drive cage. This solution allows for disabling the embedded storage controller. Qty of 1 HD blanks may need to be ordered/installed when using this solution (503771-B21) to ensure all bays are populated with HDs or blanks. There is no support for optical media. There is no support for HD LED or thermal management when this solution is deployed. Only supported on non Hot Plug SFF Hard Drives configurations. Hot Plug is not supported. Loss of HD support for all drives bays except for the 1 deployed in this configuration. VMWare (ESX3.5/i) is not supported in this configuration. | 627121-B21 |
| HP Smart Array Advanced Pack including 1yr 24x7 Technical Support and Updates Single Server License<br>NOTE: This part number can be used to purchase a single license or to order multiple licenses with a single activation key. Customers will receive a license entitlement certificate via e-mail. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Include one year of 24x7 HP Software Technical Support Services.<br>NOTE: Please see the QuickSpecs for Technical Specifications and additional information:<br>http://h18000.www1.hp.com/products/quickspecs/13203_div/13203_div.html (Smart Array P212 Controller)<br>http://h18000.www1.hp.com/products/quickspecs/13201_div/13201_div.html (Smart Array P410 Controller)<br>http://h18000.www1.hp.com/products/quickspecs/13202_div/13202_div.html (Smart Array P411 Controller)<br>http://h18000.www1.hp.com/products/quickspecs/13558_div/13558_div.html (Smart Array P812 Controller)<br>http://h18000.www1.hp.com/products/quickspecs/13200_div/13200_div.html (Smart Array Advanced Pack) | 516471-B21 |
| SAS Controller Options | |
| HP 24 Bay 6Gb SAS Expander Card<br>NOTE: Please see the QuickSpecs for Technical Specifications and additional information:<br>http://h18004.www1.hp.com/products/quickspecs/13232_div/13232_div.html (SAS Expander Card) | 468406-B21 |
| SAS HBA | |
| HP Modular Smart Array SC08e 2-ports Ext PCIe x8 SAS Host Bus Adapter<br>NOTE: This is a 2 x4 External Port HBA<br>NOTE: This is only approved for the HP P2000 G3 SAS Modular Smart Array. | 614988-B21 |

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| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18004.www1.hp.com/products/quickspecs/13651_div/13651_div.html (SC08e 6Gb HBA) | |
| | SCSI HBA | |
| | HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter | 412911-B21 |
| | NOTE: Recommended HBA for SCSI tape drive connect. | |
| | NOTE: Please see the following QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/12566_div/12566_div.html (SC11Xe HBA) | |
| HP Backup & Recovery Software | Data Protector Express | |
| | HP Data Protector Express V5.0 for 1 Server E-LTU | TC330AAE |
| | HP Data Protector Express V5.0 for 3 Servers E-LTU | TC331AAE |
| | HP Data Protector Express V5.0 for 10 Servers E-LTU | TC332AAE |
| | HP Basic Upgrade to Data Protector Express V5 for 1 Server E-LTU | TC333AAE |
| | NOTE: One of these Data Protector Express base products is required. To see available options: http://www.hp.com/go/dataprotectorexpress | |
| HP Tape Backup | NOTE: For the complete range of tape drives, autoloaders, libraries and media see: http://www.hp.com/go/tape. For hardware and software compatibility of HP tape backup products see: http://www.hp.com/storage/SPOCK. | |
| | HP DAT 320 USB in 1U Rack-mount Kit | AP835B |
| | HP 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader | AK377A |
| | NOTE: Requires HP 1U Tape Autoloader Rack Kit (AH166A) for rack installation. Connection using HP P212 SAS Smart Array Controller (462828-B21) recommended. | |
| | HP DAT 320 SAS Internal Tape Drive | AJ830A |
| | NOTE: For installation into 1U SAS rack kit (AE459B) or 3U SAS rack kit (AG576B). No peripheral bay available for installation into the server. Connection using HP Smart Array P212/Zero Memory Controller (462828-B21) recommended. | |
| | HP LTO-4 Ultrium 1760 SAS (1) in 1U Rack-mount Kit | EH946B |
| | NOTE: Connection using HP Smart Array P212/Zero Memory Controller (462828-B21) recommended. | |
| | HP LTO-5 Ultrium 3000 SAS Tape Drive in 1U Rackmount | EJ014A |
| | NOTE: Connection using HP Smart Array P212/Zero Memory Controller (462828-B21) recommended. | |
| | HP 1/8 G2 LTO-5 Ultrium 3000 SAS Tape Autoloader | BL536A |
| | NOTE: Requires HP 1U Tape Autoloader Rack Kit (AH166A) for rack installation. Connection using HP P212 Smart Array Controller SAS (462828-B21) recommended. | |
| | HP MSL2024 1 LTO-4 Ultrium 1760 SAS Tape Library | AK378A |
| | HP MSL2024 1 LTO-5 Ultrium 3000 SAS Tape Library | BL537A |
| | NOTE: Connection using HP P212 Smart Array Controller SAS (462828-B21) recommended. | |
| | HP MSL4048 2 LTO-4 Ultrium 1760 SAS Tape Library | AK380A |

*Additional Options*

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|---|---|---|
| | HP MSL4048 2 LTO-5 Ultrium 3000 SAS Tape Library<br>NOTE: Connection using HP Smart Array P212/Zero Memory Controller (462828-B21) recommended. | BL538A |
| HP Disk Backup | NOTE: For the complete range of D2D Backup Systems see: http://www.hp.com/go/d2d. For the complete range of RDX drives and media see: http://www.hp.com/go/rdx. For hardware and software compatibility of HP disk backup products see: http://www.hp.com/storage/SPOCK. | |
| | HP D2D Backup Systems with Backup Data Deduplication | |
| | HP D2D2502i Backup System<br>NOTE: 1.5TB of useable network disk backup capacity. Network connected appliance with connectivity using the iSCSI protocol. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended. | EJ001B |
| | HP D2D2504i Backup System<br>NOTE: 3.0TB of useable network disk backup capacity. Network connected appliance with connectivity using the iSCSI protocol. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended. | EJ002B |
| | HP StorageWorks D2D4004i Backup System<br>NOTE: 3.0TB (expandable to 7.5TB) of useable network disk backup capacity. Network connected appliance with connectivity using the iSCSI protocol. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended. | EH938A |
| | HP D2D4112 Backup System<br>NOTE: 9.0TB (expandable to 18.0TB) of useable network disk backup capacity. Fibre Channel SAN connected appliance. Direct server attach is not supported, requires connection via SAN fabric. | EH993B |
| | HP RDX Removable Disk Backup Systems USB<br>NOTE: Connect the USB tape power connector to the secondary SAS power connector on the system board. Refer to the hood label for SAS power connector locations on the system board.<br>NOTE: Mounts in DL385 G7 second drive cage slot. | |
| | HP RDX160 Removable Disk Backup System DL Server Module<br>NOTE: Mounts in DL385 G6 second drive cage slot (160GB of Disk Storage) | AP724A |
| | HP RDX320 Removable Disk Backup System DL Server Module<br>NOTE: 320GB of disk capacity per data cartridge. | AP725A |
| | HP RDX500 Removable Disk Backup System DL Server Module<br>NOTE: 500GB of disk capacity per data cartridge. | AP726A |
| | HP StorageWorks RDX750 Removable Disk Backup System DL Server Module<br>NOTE: 750GB of disk capacity per data cartridge. | AW578A |
| | HP RDX1000 Removable Disk Backup System DL Server Module<br>NOTE: 1 TB of disk capacity per data cartridge. | BV848A |

*Additional Options*

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|---|---|---|
| HP Storage Options | Fibre Channel HBA | |
| | NOTE: For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 and Linux, please see: http://h18006.www1.hp.com/storage/saninfrastructure/hba.html | |
| | Brocade Fibre Channel HBAs | |
| | HP 81B PCIe 8Gb Fibre Channel Single Port Host Bus Adapter | AP769A |
| | HP 82B PCIe 8Gb Fibre Channel Dual Port Host Bus Adapter | AP770A |
| | HP 41B PCIe 4Gb Fibre Channel Single Port Host Bus Adapter | AP767A |
| | HP 42B PCIe 4Gb Fibre Channel Dual Port Host Bus Adapter | AP768A |
| | Emulex Fibre Channel HBAs | |
| | HP 81E 8Gb Single Port PCI-e Fibre Channel Host Bus Adapter | AJ762A |
| | HP 82E 8Gb Dual Port PCI-e Fibre Channel Host Bus Adapter | AJ763A |
| | HP FC2142SR 4Gb PCIe Host Bus Adapter | A8002A |
| | HP FC2242SR 4Gb PCIe DC Host Bus Adapter | A8003A |
| | QLogic Fibre Channel HBAs | |
| | HP 81Q PCI-e Fibre Channel Host Bus Adapter | AK344A |
| | HP 82Q 8Gb Dual Port PCI-e Fibre Channel Host Bus Adapter | AJ764A |
| | HP FC1142SR 4Gb PCIe Host Bus Adapter | AE311A |
| | HP FC1242SR 4Gb PCIe DC Host Bus Adapter | AE312A |
| | SCSI HBA | |
| | HP U320e SCSI Dual Channel Host Bus Adapter<br>NOTE: Recommended HBA for MSL SCSI Tape Library connect. | AH627A |
| | SAN Switches | |
| | HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter<br>NOTE: If selected, this card should not be populated in slot 1 of the primary riser. | QR559A |
| | HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter<br>NOTE: If selected, this card should not be populated in slot 1 of the primary riser. | QR558A |
| | Converged Network Adapter | |
| | HP CN1100E Dual Port Converged Network Adapter | BK835A |
| | HP CN1000Q Dual Port Converged Network Adapter | BS668A |
| | HP CN1000E Dual Port Converged Network Adapter | AW520A |
| | SAN Switches | |
| | HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter | QR559A |
| | HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter | QR558A |
| | Converged Network Adapter | |
| | HP CN1100E Dual Port Converged Network Adapter | BK835A |
| | HP CN1000Q Dual Port Converged Network Adapter | BS668A |
| | HP CN1000E Dual Port Converged Network Adapter | AW520A |

*Additional Options*

| | | |
|---|---|---|
| HP Modular Smart Array | MSA SAN Storage Arrays | |
| | HP MSA70 Array | 418800-B21 |
| | NOTE: Please see the QuickSpecs for additional options and configuration information at: http://h18000.www1.hp.com/products/quickspecs/12652_div/12652_div.html (Worldwide) | |
| | Disk Enclosures | |
| | HP D2600 Disk Enclosure | AJ940A |
| | HP D2700 Disk Enclosure | AJ941A |
| | NOTE: Please see the QuickSpecs for additional options and configuration information at: http://h18000.www1.hp.com/products/quickspecs/13404_div/13404_div.html | |
| HP Uninterruptible Power Systems | HP Rack-mountable UPS | |
| | HP R1500 G3 Uninterruptible Power Supply (UPS) | |
| | HP R1.5kVA G3 1U NA Uninterruptible Power System | AF469A |
| | HP R1.5kVA G3 1U JP/TW Uninterruptible Power System | AF470A |
| | HP R1.5kVA G3 1U INTL Uninterruptible Power System | AF471A |
| | NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14059_div/14059_div.html (Worldwide) | |
| | HP Rack-Mountable R5500 UPS | |
| | HP R5500 6000VA INTL 3U Rackmount Uninterruptible Power System | AF416A |
| | HP R5500 5000kVA NA/JP 3U Rackmount Uninterruptible Power System | AF426A |
| | NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/11871_div/11871_div.html (Worldwide) | |
| | HP R/T3000 G2 Uninterruptible Power System (UPS) | |
| | HP R/T3000 G2 2U L530 Low Voltage NA/JP Uninterruptible Power System | AF466A |
| | HP R/T3000 G2 2U L620 High Voltage NA/JP Uninterruptible Power System | AF467A |
| | HP R/T3000 G2 2U Detachable Cord High Voltage INTL Uninterruptible Power System | AF468A |
| | NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14058_div/14058_div.html (Worldwide) | |
| | R5000 Uninterruptible Power System (UPS) | |
| | HP R5KVA 3U IEC309-32A High Voltage INTL Uninterruptible Power System | AF461A |
| | HP R5KVA 3U L630 High Voltage NA/JP Uninterruptible Power System | AF460A |
| | NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14109_div/14109_div.html (Worldwide) | |
| | R7000 Uninterruptible Power System (UPS) | |
| | HP R7KVA 4U 50A High Voltage NA/JP Uninterruptible Power System | AF462A |
| | HP R7KVA 4U IEC-32A High Voltage INTL Uninterruptible Power System | AF463A |

NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14110_div/14110_div.html (Worldwide)

NOTE: Additional HP Uninterruptible Power Systems (UPS) are available for this equipment. For information on all HP UPSs and accessories please go to www.hp.com/products/ups (Worldwide)

NOTE: For additional information on sizing your HP UPS, please reference: http://www.upssizer.com

NOTE: Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: www.hp.com/products/powercords.

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| | | |
|---|---|---|
| Power Distribution Units | HP Monitored Power Distribution Unit: Half Rack Version | |
| | HP 4.9kVA 24A Single Input Single Phase NA/JP Monitored Power Distribution Unit | AF914A |
| | HP 7.3kVA 32A Single Input Single Phase INTL Monitored Power Distribution Unit | AF915A |
| | HP Monitored Power Distribution Unit: Full Rack Version | |
| | HP 8.6kVA 24A Single Input Three Phase NA/JP Monitored Power Distribution Unit | AF504A |
| | HP 8.3kVA 40A Single Input Single Phase NA/JP Monitored Power Distribution Unit | AF506A |
| | HP 11kVA 16A Single Input Three Phase INTL Monitored Power Distribution Unit | AF508A |
| | HP 7.3kVA 32A Single Input Single Phase INTL Monitored Power Distribution Unit | AF510A |
| | NOTE: Please see the following QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/12118_div/12118_div.html (Worldwide) | |
| | Modular Power Distribution Units 1U/0U (Up to 32 outlets) | |
| | NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks). | |
| | HP 4.9kVA 24A High Voltage NA/JP Modular Power Distribution Unit | 252663-D72 |
| | HP 8.3kVA 40A High Voltage NA/JP Modular Power Distribution Unit | 252663-D73 |
| | HP 7.3kVA 32A High Voltage INTL Modular Power Distribution Unit | 252663-B31 |
| | HP 3.6kVA 16A High Voltage INTL Modular Power Distribution Unit | 252663-B24 |
| | NOTE: This PDU has a detachable input power cord and allows for adaptability to country specific power requirements. | |
| | NOTE: Please see the following QuickSpecs for additional options including shorter jumper cables and country specific power cords: http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.html (Worldwide) | |
| | NOTE: For additional information on HP Power Distribution Units including accessories please go to: www.hp.com/go/pdu. | |
| | NOTE: Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: www.hp.com/products/powercords. | |

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*Additional Options*

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|---|---|---|
| HP Intelligent Power Distribution Units (iPDU) | iPDU Core Units | |
| | HP 4.9kVA 24A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit | AF520A |
| | HP 8.6kVA 24A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit | AF522A |
| | HP 7.3kVA 32A Single Phase INTL Core Intelligent Modular Power Distribution Unit | AF525A |
| | HP 11kVA 16A Three Phase INTL Core Intelligent Modular Power Distribution Unit | AF526A |
| | HP 11.4kVA 16A 415V Three Phase L22-20 NA Core Intelligent Power Distribution Unit | AF900A |
| | HP 17.3kVA 24A 415V Three Phase L22-30 NA Core Intelligent Power Distribution Unit | AF902A |
| | HP 17.3kVA 24A 415V Three Phase IEC309 NA Core Intelligent Power Distribution Unit | AF901A |
| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13650_div/13650_div.html (Worldwide) | |
| HP Rack Series | HP Rack 10000 G2 Series (Carbon/Graphite Metallic) | |
| | HP 10642 G2 Pallet Universal Rack | AF001A |
| | HP 10642 G2 Shock Universal Rack | AF002A |
| | HP 10642 G2 1200mm deep Shock Rack | AF092A |
| | HP 10647 G2 1200mm deep Shock Rack | AF094A |
| | NOTE: It is mandatory to use a shock pallet when shipping racks with equipment installed. | |
| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.html (Worldwide) | |
| | NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower. | |
| | NOTE: The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 G2 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors. CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment: Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 830 square inches (5,350 sq cm) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation). Side: The clearance between the installed rack component and the side panels of the rack must be a minimum of 2.75 inches (7 cm). CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage. | |

NOTE: Quick deploy rail system provides tool-free support for racks with square or round mounting holes (including Compaq/HP 7000, 9000, 10000 G2 and HP series), with an adjustment range of 24" - 36". The ambidextrous cable management arm can be mounted on either the left or right side for improved cable management.

| | | |
|---|---|---|
| HP Rack Options | Keyboards and Monitors | |
| | HP TFT7600 G2 KVM Console Rackmount Keyboard US Monitor | AZ870A |
| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13731_div/13731_div.html (Worldwide) | |
| | HP Server Console Switches | |
| | HP Server Console 0x2x8 Port Analog Switch | AF616A |
| | HP Server Console 0x2x16 Port Analog Switch | AF617A |
| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/11834_div/11834_div.html (Worldwide) | |
| | HP Server Console Switch G2 with Virtual Media & CAC | |
| | HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software | AF618A |
| | HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software | AF619A |
| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13475_div/13475_div.html (Worldwide) | |
| | HP IP Console Switch G2 with Virtual Media & CAC | |
| | HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software | AF620A |
| | HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software | AF621A |
| | HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software | AF622A |
| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13474_div/13474_div.html (Worldwide) | |

*Additional Options*

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|---|---|---|
| **HP USB and SD Options** | HP USB 04 Standard Keyboard | DT528A#ABA |
| | HP 4GB Secure Digital High Capacity Flash Media Kit<br>NOTE: Blank SD media device is supported for use with VMware and Citrix. SD media must be installed in the internal slot of the ProLiant server. Learn more at: http://www.hp.com/go/proliantvirtualization. | 580387-B21 |
| | HP 2GB USB Flash Media Drive Key Kit<br>NOTE: HP qualified blank USB key for use with HP ProLiant servers that support the VMware virtualization environment and other HP value-add software like SmartStart. HP recommends this industry standard USB flash device for use with VMware ESXi. USB device must be installed in the internal slot of the ProLiant server for use with VMware ESXi. Refer to HP VMware Getting Started Guide for installation instructions. | 608447-B21 |
| **HP Care Pack Services** | **Hardware Services Response On-site Service** | |
| | HP 3 year 4 hour 13x5 ProLiant DL38x Hardware Support | U4544E |
| | HP 4 year 4 hour 13x5 ProLiant DL38x Hardware Support | U8101E |
| | HP 5 year 4 hour 13x5 ProLiant DL38x Hardware Support | U8067E |
| | HP 3 year 4 hour 24x7 ProLiant DL38x Hardware Support | U4545E |
| | HP 5 year 4 hour 24x7 ProLiant DL38x Hardware Support | U8084E |
| | **Hardware Services Call to Repair On-site Service** | |
| | HP 3 year 6 hour 24x7 Call to Repair ProLiant DL38x Hardware Support | U4546E |
| | HP 4 year Next business day ProLiant DL38x Hardware Support | UA010E |
| | HP 5 year Next business day ProLiant DL38x Hardware Support | UA009E |
| | HP 3 year 24x7 24 hour Call to Repair ProLiant DL38x Hardware Support | UP717E |
| | HP 4 year 24x7 24 hour Call to Repair ProLiant DL38x Hardware Support | UP718E |
| | HP 5 year 24x7 24 hour Call to Repair ProLiant DL38x Hardware Support | UP719E |
| | **Installation & Start-up Services** | |
| | HP Install ProLiant DL38x Service | U4554E |
| | HP Startup ProLiant DL38x Service | U4555E |
| | **Support Plus 24** | |
| | HP 3 year Support Plus 24 Microsoft ProLiant DL38x Service | U4557E |
| | HP 3 year Support Plus 24 SuSE ProLiant DL38x Service | U6312E |
| | NOTE: For more information, customer/resellers can contact: http://www.hp.com/services/carepack. | |

NOTE: Memory configurations listed do not apply to "Factory Integrated Models".

### Memory configurations

- This server supports 2GB to 512GB of system memory using DDR3 2GB, 4GB, 8GB, 16GB and 32GB memory modules across 24 memory sockets.
- For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator

### Advanced ECC memory

- Advanced ECC memory is the memory protection mode for this server. In Advanced ECC, the server does not fail because of correctable memory errors. The server provides notification if the level of correctable errors exceeds a pre-defined threshold rate.
- Advanced ECC provides additional protection over standard ECC because it is possible to correct certain memory errors that would otherwise be uncorrectable and result in a server failure.
- Whereas standard ECC can correct single-bit memory errors, Advanced ECC can correct single-bit memory errors and multi-bit memory errors if all failed bits are on the same DRAM device on the memory module.

### Online Spare memory

- Online Spare memory mode is a higher level of memory protection that complements Standard Memory mode with Advanced ECC. With Online Spare mode, a DIMM with a rank of memory at least as large as the other ranks in the system, or memory board, is designated as the Online Spare rank.2 If one of the other DIMMs exceeds a threshold rate of correctable memory errors, the affected rank of memory within that DIMM is taken offline and the data is copied to the Online Spare rank. This capability maintains server availability and memory reliability without service intervention or server interruption. The DIMM that exceeded the error threshold can be replaced at the customer's convenience during a scheduled shutdown. Online Spare reduces the chance of an uncorrectable error bringing down the system; however, it does not fully protect the system against uncorrectable memory errors.
- Online Spare mode is beneficial to businesses with sites that do not have IT staff available to service a failure, do not always have replacement memory readily available, or cannot bring down the server until a scheduled shutdown. The cost of implementation for Online Spare over Advanced ECC is the hardware cost of the extra DIMMs for the spare memory bank.
- The user configures the system for Online Spare mode through the RBSU3. Online Spare configuration requirements vary for each server series, but it does not require operating system support or special software beyond the System BIOS. However, if messaging and logging are desired at the console along with messages in HP Systems Insight Manager, an operating system must be used that has system management and agent support for Advanced Memory Protection.

### Population order

- The two tables below represent the memory module population order for one processor. The population order for the other processor is identical. SR denotes Single Rank, DR denotes Dual Rank, and QR denotes Quad Rank.
- All memory modules must follow the population order shown in these two tables for both processors with the following exception:
- QR memory modules must be installed only in memory sockets 2, 5, 8, and 11, while following the population order for those memory sockets.

| Processor memory socket | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Rank support per memory socket | SR/DR | SR/DR/QR | SR/DR | SR/DR | SR/DR/QR | SR/DR |
| Population order | A | I | E | C | K | G |
| Processor memory channel | A | A | A | B | B | B |

*Memory*

| Processor memory socket | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| Rank support per memory socket | SR/DR | SR/DR/QR | SR/DR | SR/DR | SR/DR/QR | SR/DR |
| Population order | B | J | F | D | L | H |
| Processor memory channel | C | C | C | D | D | D |

Population rules

When installing memory modules, observe the following population rules:

- Use only HP memory modules listed in this document.
- Advanced ECC is not available if x4 and x8 memory modules are mixed in channels (A and B), (C and D), or both, but standard ECC is still available. Advanced ECC is available if x4 and x8 memory modules are mixed in memory channels (A and C), (B and D), or both.
- No more than two UDIMMs may be installed per channel.
- Do not mix UDIMMs and RDIMMs within this server.

Population guidelines

While adhering to the memory population rules ("Population rules" - see above), performance can be improved by following the guidelines below:

- Memory modules may be installed one at a time per processor, but installing two at a time per processor provides for additional performance, installing four at a time per processor provides for better performance, and installing equal amounts of memory for both processors provides for best performance.
- Install all memory modules of the same speed on the same processor for best performance.
- Install all memory modules of the same voltage on the same processor for best power.

Memory bus speed

Depending on the quantity and native speed of memory modules installed, memory bus speeds can be 1600 MHz, 1333 MHz, 1066 MHz, 800 MHz, or 667 MHz. Memory bus speeds can be different for each processor.

To determine memory bus speeds, do the following:

Within RBSU, select the Power Management Options menu > Advanced Power Management Options menu > Maximum Memory Bus Frequency menu.

- Select one of the following menu options:
  - Auto (default) - The memory bus speed is set to what is shown in the following table. If the native speed of the installed memory module is slower than the memory bus speed, the memory bus speed is set to the memory module native speed

*Memory*

| Memory modules Per channel | QR | SR or DR | Memory module native speed | Memory bus speed (standard-voltage memory module) | Memory bus speed (low-voltage memory module) |
|---|---|---|---|---|---|
| 1 | - | 1 | SR 1600 MHz[2]<br>DR 1600 MHz[2] | 1600 MHz | NA |
| 1 | - | 1[1] | SR 1333 MHz<br>DR 1333 MHz | 1333 MHz | 1066 MHz |
| 1 | 1 | - | QR 1066 MHz | 1066 MHz | 1066 MHz |
| 2 | - | 2[1] | SR 1600 MHz[2]<br>DR 1600 MHz[2]<br>SR 1333 MHz<br>DR 1333 MHz | 1333 MHz | 1066 MHz |
| 2 | 1 | 1 | SR 1333 MHz<br>DR 1333 MHz<br>QR 1066 MHz | 800 MHz | 800 MHz |
| 3 | - | 3 SR | SR 1600 MHz[2]<br>SR 1333 MHz | 1066 MHz | 1066 MHz |
| 3 | - | 3 DR | DR 1600 MHz[2]<br>DR 1333 MHz | 1066 MHz | 800 MHz |
| 3 | - | 3 mixed | SR 1600 MHz[2]<br>DR 1600 MHz[2]<br>SR 1333 MHz<br>DR 1333 MHz | 1066 MHz | 800 MHz |
| 3 | 1 | 2 | SR 1333 MHz<br>DR 1333 MHz<br>QR 1066 MHz | 800 MHz | 667 MHz |

[1] These are the only configurations supported by UDIMMs. All configurations listed in this table are supported by RDIMMs.
[2] 1600 MHz memory is only supported in conjunction with Opteron 6200 series processors.
This table is for reference only.

NOTE: The memory bus speed is set to 800 MHz regardless of the quantity of memory modules installed unless the table above reflects a slower memory bus speed.
NOTE: There may be more than one memory bus speed menu option.
NOTE: LVDIMM support is dependent on the ROM version.

### Memory Installation Examples

These memory installation examples show the memory sockets associated with the first processor only. If there is a second processor installed, like for a performance model, then these examples can be applied toward the memory sockets associated with the second processor also.

### 2 RDIMMs per processor

- Standard memory: 2x2GB RDIMMs (4GB per processor)
- Optional memory: Adding 10x8GB RDIMMs to standard memory (84GB per processor)
- Maximum memory: Replacing standard memory with 4x32GB QR RDIMMs and 8x16GB DR RDIMMs (maximum of 256GB per processor)

| Processor memory socket | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Standard Memory | 2GB DR | | | | | |
| Optional Memory | 2GB DR | 8GB DR | 8GB DR | 8GB DR | 8GB DR | 8GB DR |
| Maximum Memory | 16GB DR | 32GB QR | 16GB DR | 16GB DR | 32GB QR | 16GB DR |

| Processor memory socket | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| Standard Memory | 2GB DR | | | | | |
| Optional Memory | 2GB DR | 8GB DR | 8GB DR | 8GB DR | 8GB DR | 8GB DR |
| Maximum Memory | 16GB DR | 32GB QR | 16GB DR | 16GB DR | 32GB QR | 16GB DR |

2 UDIMMs per processor

- Standard memory: 2x2GB UDIMMs (4GB per processor)
- Optional memory: Adding 6x4GB UDIMMs to standard memory (28GB per processor)
- Maximum memory: Replacing standard memory with 8x4GB UDIMMs (maximum of 32GB per processor)

| Processor memory socket | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Standard Memory | 2GB DR | | | | | |
| Optional Memory | 2GB DR | | 4GB DR | 4GB DR | | 4GB DR |
| Maximum Memory | 4GB DR | | 4GB DR | 4GB DR | | 4GB DR |

| Processor memory socket | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| Standard Memory | 2GB DR | | | | | |
| Optional Memory | 2GB DR | | 4GB DR | 4GB DR | | 4GB DR |
| Maximum Memory | 4GB DR | | 4GB DR | 4GB DR | | 4GB DR |

4 RDIMMs per processor

- Standard memory: 4x2GB RDIMMs (8GB per processor)
- Optional memory: Adding 8x8GB RDIMMs to standard memory (72GB per processor)
- Maximum memory: Replacing standard memory with 4x32GB QR RDIMMs and 8x16GB DR RDIMMs (maximum of 256GB per processor)*

| Processor memory socket | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Standard Memory | 2GB DR | | | 2GB DR | | |
| Optional Memory | 2GB DR | 8GB DR | 8GB DR | 2GB DR | 8GB DR | 8GB DR |
| Maximum Memory | 16GB DR | 32GB QR | 16GB DR | 16GB DR | 32GB QR | 16GB DR |

| Processor memory socket | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| Standard Memory | 2GB DR | | | 2GB DR | | |
| Optional Memory | 2GB DR | 8GB DR | 8GB DR | 2GB DR | 8GB DR | 8GB DR |
| Maximum Memory | 16GB DR | 32GB QR | 16GB DR | 16GB DR | 32GB QR | 16GB DR |

* If you have a 2P system and want the maximum memory of 512GB installed, you will need to replace all standard memory with 8x32GB QR RDIMMs and 16x16GB DR RDIMMs.

*Memory*

Following are memory options available from HP:

**HP Memory**

NOTE: DIMM banks are active only when the corresponding processor socket is populated.

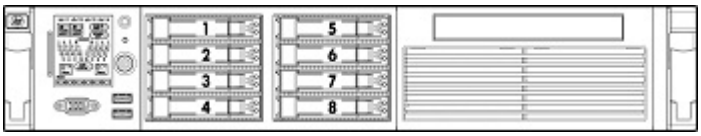
**Registered DIMMs (RDIMMs)**

| | |
|---|---|
| HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit | 593907-B21 |
| HP 4GB (1x4GB) Single Rank x4 PC3-12800 (DDR3-1600) Registered CAS-11 Memory Kit | 676331-B21 |
| HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit | 593911-B21 |
| HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit | 604500-B21 |
| HP 8GB (1x8GB) Single Rank x4 PC3-12800 (DDR3-1600) Registered CAS-11 Memory Kit | 676333-B21 |
| HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit | 593913-B21 |
| HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit | 604502-B21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit | 684066-B21 |
| HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit | 593915-B21 |
| HP 16GB (1x16GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 LP Memory Kit | 627808-B21 |
| HP 32GB (1x32GB) Quad Rank x4 PC3L-8500 (DDR3-1066) Registered CAS-7 LP Memory Kit | 627810-B21 |

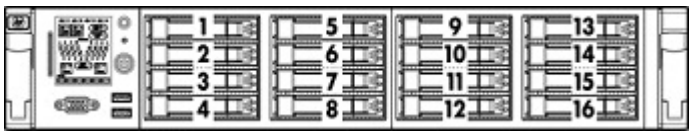
**Unbuffered with ECC DIMMs (UDIMMs)**

| | |
|---|---|
| HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Unbuffered CAS-9 Memory Kit | 593921-B21 |
| HP 4GB (1x4GB) Dual Rank x8 PC3-10600 (DDR3-1333) Unbuffered CAS-9 Memory Kit | 593923-B21 |

NOTE: PC3L is a low voltage memory




1-8 Eight SFF SAS hot plug hard drive bays




1-16 Sixteen SFF SAS hot plug hard drive bays
NOTE: This configuration does not support optical drive.
NOTE: This configuration requires a second controller or SAS Expander Card.

1-6 Six LFF SAS hot plug hard drive bays
NOTE: This configuration does not support optical drive.
NOTE: This configuration replaces SFF hard drive cage.

NOTE: Connect the SAS power cable from the primary drive cage (drive cage containing SFF drives 1-8 or LFF drives 1-6) to the primary SAS power connector on the system board. If a secondary drive cage (drive cage containing SFF drives 9-16) is installed, connect a SAS power cable from the secondary drive cage to the secondary SAS power connector on the system board. Refer to the hood label for SAS power connector locations on the system board.

## Drive Support

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| **Removable Media** | | | |
| Slim SATA DVD RW Optical Drive<br>NOTE: Included in performance models. | Only 1 available removable media bay | Slimline bay | Integrated SATA |
| Slim SATA DVD-ROM Optical Drive | Only 1 available removable media bay | Slimline bay | Integrated SATA |

**Hard Drives**

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.
NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.
NOTE: IMPORTANT: Installation of both SAS and SATA hard drives or a mixture of SSDs and traditional hard drives in a single RAID volume is not supported.

**SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives**

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 900GB 6G SAS 10K | Up to 16 | 1-8 | HP Smart Array P212/Zero Memory Controller |
| 600GB 6G SAS 10K | | 1-16 | HP Smart Array P212/256 MB Controller |
| 450GB 6G SAS 10K | | NOTE: | HP Smart Array P410/256 MB Controller |

*Storage*

| | | |
|---|---|---|
| 300GB 6G SAS 15K<br>300GB 6G SAS 10K<br>146GB 6G SAS 15K<br>72GB 6G SAS 15K | Depending on Model | HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 600GB 6G SAS 15K<br>450GB 6G SAS 15K<br>300GB 6G SAS 15K | Up to 6 | 1-6 | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 1TB 6G SAS 7.2K<br>500GB 6G SAS 7.2K | Up to 16 | 1-8<br>1-16<br>NOTE:<br>Depending on Model | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 3TB 6G SAS 7.2K<br>2TB 6G SAS 7.2K<br>1TB 6G SAS 7.2K | Up to 6 | 1-6 | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 1TB 3G SATA 7.2K<br>500GB 3G SATA 7.2K | Up to 16 | 1-8<br>1-16<br>NOTE:<br>Depending on Model | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller |

| | | | |
|---|---|---|---|
| | | | HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 3TB 3G SATA 7.2K<br>2TB 3G SATA 7.2K<br>1TB 3G SATA 7.2K<br>500GB 3G SATA 7.2K | Up to 6 | 1-6 | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

SATA Hot Plug LFF (3.5-inch) Entry (ETY) Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 250GB 3G SATA 7.2K | Up to 6 | 1-6 | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

SATA Hot Plug 2.5" Enterprise Mainstream Solid State Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 400GB 3.0G SATA SSD<br>200GB 3.0G SATA SSD<br>100GB 3.0G SATA SSD | Up to 16 | 1-8<br>1-16 | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

SATA Hot Plug 3.5" Midline (MDL) Solid State Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 400GB 3.0G SATA SSD<br>200GB 3.0G SATA SSD<br>100GB 3.0G SATA SSD | Up to 6 | 1-6 | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

### 6G SAS Hot Plug Enterprise Performance Solid State Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 200GB 6G SAS SLC SFF SSD<br>400GB 6G SAS SLC SFF SSD | Up to 16 | 1-8<br>1-16<br>NOTE: Depending on Model | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

### 6G SAS Hot Plug Enterprise Mainstream Solid State Drives

| | Quantity Supported | Position Supported | Controller |
|---|---|---|---|
| 800GB 6G SAS MLC SFF SSD<br>400GB 6G SAS MLC SFF SSD<br>200GB 6G SAS MLC SFF SSD | Up to 16 | 1-8<br>1-16<br>NOTE: Depending on Model | HP Smart Array P212/Zero Memory Controller<br>HP Smart Array P212/256 MB Controller<br>HP Smart Array P410/256 MB Controller<br>HP Smart Array P410/512 MB BBWC Controller<br>HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P812/512 BBWC Controller |

### External Storage

| | Quantity Supported | Position Supported | Host Controller or Adapter |
|---|---|---|---|
| 70 Modular Smart Array | Up to 2 | External | HP Smart Array P212/ 256 MB Controller |
| | Up to 4 | External | HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB BBWC Controller<br>HP Smart Array P411/1G Flash Backed Cache Controller<br>HP Smart Array P812/1G Flash Backed Cache Controller |
| D2600 Disk Enclosure | Up to 4 | External | HP Smart Array P212/ 256 MB Controller |
| | Up to 8 | External | HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB Controller<br>HP Smart Array P411/1G Flash Backed Cache Controller<br>HP Smart Array P812/1G Flash Backed Write Cache Controller |
| D2700 Disk Enclosure | Up to 2 | External | HP Smart Array P212/256 MB Controller |
| | Up to 4 | External | HP Smart Array P411/256 MB Controller<br>HP Smart Array P411/512 MB Controller<br>HP Smart Array P411/1G Flash Backed Cache Controller<br>HP Smart Array P812/1G Flash Backed Write Cache Controller |

*Storage*

**Maximum Storage Capacity** - (with MSA70)

| | |
|---|---|
| Internal | 16TB (16 x 1TB SAS SFF) |
| External | 250TB (250 x 1TB SAS SFF) |
| Total | 266TB |

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**Tape and Disk Backup**

NOTE: For the complete range of tape drives, autoloaders, libraries and media, including the internal fitting models, see: http://www.hp.com/go/tape. For the complete range of D2D Backup Systems see: http://www.hp.com/go/d2d. For the complete range of RDX drives and media see: http://www.hp.com/go/rdx. For hardware and software compatibility of HP disk and tape backup products see: http://www.hp.com/storage/SPOCK.

| | Position Supported | Controller | Controller Part Number |
|---|---|---|---|
| **HP SCSI Tape Drives**<br>LTO-1 Ultrium 232<br>LTO-2 Ultrium 448<br>LTO-3 Ultrium 920<br>LTO-3 Ultrium 960<br>LTO4 Ultrium 1760<br>LTO-4 Ultrium 1840<br>DAT 40<br>DAT 72<br>DAT 160<br>1U Rack-Mount Kit<br>3U Rack-Mount Kit | External | HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter<br><br>NOTE: Please check the full compatibility information at: http://www.hp.com/storage/SPOCK | 412911-B21 |
| **HP USB Tape Drives**<br>DAT 40<br>DAT 72<br>DAT 160<br>DAT 320<br>1U USB Rack-Mount Kit | External | USB 2.0 Port | N/A |
| **HP SAS Tape Drives**<br>DAT 160<br>DAT 320<br>LTO-2 Ultrium 448<br>LTO-3 Ultrium 920<br>LTO-4 Ultrium 1760<br>LTO-4 Ultrium 1840<br>LTO-5 Ultrium 3000<br>LTO-5 Ultrium 3280<br>1U Rack-Mount Kit<br>3U Rack-Mount Kit | External | HP Smart Array P212/ZM 1-ports Int/1-ports Ext PCIe x8 SAS Controller<br><br>NOTE: Please check the full compatibility information at: http://www.hp.com/storage/SPOCK | 462828-B21 |

*Storage*

| | | | |
|---|---|---|---|
| **HP SCSI Tape Autoloaders**<br>DAT 72x10 Autoloader<br>1/8 G2 Autoloader | External | HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter<br>NOTE: Please check the full compatibility information at: http://www.hp.com/storage/SPOCK | 412911-B21 |
| **HP SCSI Tape Libraries**<br>MSL2024<br>MSL4048<br>MSL8096<br>MSL6000 | External | HP U320e SCSI Dual Channel Host Bus Adapter<br>NOTE: Please check the full compatibility information at: http://www.hp.com/storage/SPOCK | AH627A |
| **HP SAS Tape Autoloaders and Libraries**<br>1/8 G2 Autoloader<br>MSL2024<br>MSL4048<br>MSL8096 | External | HP Smart Array P212/ZM 1-ports Int/1-ports Ext PCIe x8 SAS Controller<br>NOTE: Please check the full compatibility information at: http://www.hp.com/storage/SPOCK | 462828-B21 |
| **HP Fibre Channel Tape Libraries**<br>MSL2024<br>MSL4048<br>MSL8096<br>MSL6000 | External | Please consult the EBS connectivity matrix at: http://www.hp.com/go/ebs for connectivity information and the supported Fibre Channel HBAs shown in this QuickSpecs. | N/A |
| **HP USB RDX Removable Disk Backup System**<br>RDX160<br>RDX320<br>RDX500<br>RDX750<br>RDX1TB | Internal or External | USB 2.0 Port | N/A |
| **HP D2D Backup Systems, iSCSI**<br>D2D2500i<br>D2D4000i | External | Embedded Network Controller. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended. | |
| **HP D2D Backup Systems, Fibre Channel**<br>D2D4000fc | External | Direct server attach is not supported, requires connection via SAN fabric. See: http://www.hp.com/storage/SPOCK | N/A |

*Power Specifications*

| HP 460W Common Slot Gold Hot Plug Power Supply Kit | | | | | | | |
|---|---|---|---|---|---|---|---|
| Part Number | 503296-B21 | | | | | | |
| Input Voltage Range ( V rms ) | 100 to 240 | | | | | | |
| Frequency Range (Nominal) ( Hz ) | 50/60 | | | | | | |
| Nominal Input Voltage ( Vrms ) | 100 | 120 | 200 | 208 | 220 | 230 | 240 |
| Maximum Rated Output Wattage Rating | 460 | 460 | 460 | 460 | 460 | 460 | 460 |
| Nominal Input Current ( A rms ) | 5.5 | 4.5 | 2.6 | 2.5 | 2.4 | 2.3 | 2.2 |
| Maximum Rated Input Wattage Rating ( Watts ) | 526 | 520 | 505 | 505 | 503 | 503 | 503 |
| Maximum Rated VA ( Volt-Amp ) | 548 | 542 | 527 | 527 | 524 | 524 | 524 |
| Efficiency ( % ) | 87.5 | 88.5 | 91 | 91 | 91.5 | 91.5 | 91.5 |
| Power Factor | 0.97 | | | | | | |
| Leakage Current ( mA ) | 0.42 | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |
| Maximum Inrush Current ( A peak ) | 30 | | | | | | |
| Maximum Inrush Current duration ( mS ) | 20 | | | | | | |
| Maximum British Thermal Unit Rating ( BTU-Hr ) | 1794 | 1773 | 1725 | 1725 | 1715 | 1715 | 1715 |

| HP 460W Common Slot Platinum Hot Plug Power Supply Kit | | | | | | | |
|---|---|---|---|---|---|---|---|
| Part Number | 593188-B21 | | | | | | |
| Input Voltage Range ( V rms ) | 100 to 240 | | | | | | |
| Frequency Range (Nominal) ( Hz ) | 50/60 | | | | | | |
| Nominal Input Voltage ( Vrms ) | 100 | 120 | 200 | 208 | 220 | 230 | 240 |
| Maximum Rated Output Wattage Rating | 460 | 460 | 460 | 460 | 460 | 460 | 460 |
| Nominal Input Current ( A rms ) | 5.3 | 4.3 | 2.5 | 2.4 | 2.3 | 2.2 | 2.1 |
| Maximum Rated Input Wattage Rating ( Watts ) | 512 | 505 | 493 | 493 | 492 | 492 | 491 |
| Maximum Rated VA ( Volt-Amp ) | 526 | 518 | 506 | 506 | 505 | 505 | 504 |
| Efficiency ( % ) | 89.8 | 91.2 | 93.2 | 93.3 | 93.5 | 93.6 | 93.6 |
| Power Factor | 0.985 | | | | | | |
| Leakage Current ( mA ) | 0.42 | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |
| Maximum Inrush Current ( A peak ) | 30 | | | | | | |
| Maximum Inrush Current duration ( mS ) | 20 | | | | | | |
| Maximum British Thermal Unit Rating ( BTU-Hr ) | 1747 | 1722 | 1683 | 1682 | 1679 | 1678 | 1677 |

*Power Specifications*

| HP 750W Common Slot Gold Hot Plug Power Supply Kit | | | | | | | |
|---|---|---|---|---|---|---|---|
| Part Number | 512327-B21 | | | | | | |
| Input Voltage Range ( V rms ) | 100 to 240 | | | | | | |
| Frequency Range (Nominal) ( Hz ) | 50/60 | | | | | | |
| Nominal Input Voltage ( Vrms ) | 100 | 120 | 200 | 208 | 220 | 230 | 240 |
| Maximum Rated Output Wattage Rating | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Nominal Input Current ( A rms ) | 8.9 | 7.4 | 4.3 | 4.1 | 3.9 | 3.7 | 3.6 |
| Maximum Rated Input Wattage Rating ( Watts ) | 857 | 847 | 824 | 824 | 820 | 820 | 820 |
| Maximum Rated VA ( Volt-Amp ) | 894 | 884 | 859 | 854 | 854 | 854 | |
| Efficiency ( % ) | 87.5 | 88.5 | 91 | 91 | 91.5 | 91.5 | 91.5 |
| Power Factor | 0.97 | | | | | | |
| Leakage Current ( mA ) | 0.42 | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |
| Maximum Inrush Current ( A peak ) | 30 | | | | | | |
| Maximum Inrush Current duration ( mS ) | 20 | | | | | | |
| Maximum British Thermal Unit Rating ( BTU-Hr ) | 2925 | 2892 | 2812 | 2812 | 2797 | 2797 | 2797 |

| HP 750W Common Slot Platinum Hot Plug Power Supply Kit | | | | | | | |
|---|---|---|---|---|---|---|---|
| Part Number | 593831-B21 | | | | | | |
| Input Voltage Range ( V rms ) | 100 to 240 | | | | | | |
| Frequency Range (Nominal) ( Hz ) | 50/60 | | | | | | |
| Nominal Input Voltage ( Vrms ) | 100 | 120 | 200 | 208 | 220 | 230 | 240 |
| Maximum Rated Output Wattage Rating | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Nominal Input Current ( A rms ) | 8.6 | 7.1 | 4.2 | 4.0 | 3.8 | 3.6 | 3.4 |
| Maximum Rated Input Wattage Rating ( Watts ) | 841 | 828 | 809 | 808 | 807 | 806 | 805 |
| Maximum Rated VA ( Volt-Amp ) | 863 | 850 | 830 | 829 | 828 | 827 | 826 |
| Efficiency ( % ) | 89.2 | 90.6 | 92.7 | 92.8 | 93 | 93.1 | 93.2 |
| Power Factor | 0.985 | | | | | | |
| Leakage Current ( mA ) | 0.42 | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |
| Maximum Inrush Current ( A peak ) | 30 | | | | | | |
| Maximum Inrush Current duration ( mS ) | 20 | | | | | | |
| Maximum British Thermal Unit Rating ( BTU-Hr ) | 2868 | 2825 | 2761 | 2757 | 2753 | 2749 | 2747 |

*Power Specifications*

| HP 1200W Common Slot Platinum Hot Plug Power Supply Kit | | | | | | | |
|---|---|---|---|---|---|---|---|
| Part Number | 578322-B21 | | | | | | |
| Input Voltage Range ( V rms ) | 100 to 240 | | | | | | |
| Frequency Range (Nominal) ( Hz ) | 50/60 | | | | | | |
| Nominal Input Voltage ( Vrms ) | 100 | 120 | 200 | 208 | 220 | 230 | 240 |
| Maximum Rated Output Wattage Rating | 800 | 900 | 1200 | 1200 | 1200 | 1200 | 1200 |
| Nominal Input Current ( A rms ) | 9.3 | 8.6 | 6.7 | 6.5 | 6.1 | 5.8 | 5.6 |
| Maximum Rated Input Wattage Rating ( Watts ) | 889 | 989 | 1290 | 1290 | 1290 | 1290 | 1290 |
| Maximum Rated VA ( Volt-Amp ) | 927 | 1031 | 1345 | 1345 | 1345 | 1345 | 1345 |
| Efficiency ( % ) | 90 | 91 | 93 | 93 | 93 | 93 | 93 |
| Power Factor | 0.97 | | | | | | |
| Leakage Current ( mA ) | 0.42 | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |
| Maximum Inrush Current ( A peak ) | 30 | | | | | | |
| Maximum Inrush Current duration ( mS ) | 10 | | | | | | |
| Maximum British Thermal Unit Rating ( BTU-Hr ) | 3033 | 3375 | 4403 | 4403 | 4403 | 4403 | 4403 |

| HP 1200W Common Slot -48VDC Hot Plug Power Supply Kit | | | |
|---|---|---|---|
| Part Number | 437573-B21 | | |
| Input Voltage Range ( V rms ) | 36-72 | | |
| Frequency Range (Nominal) ( Hz ) | DC | | |
| Nominal Input Voltage ( Vrms ) | 36 | 48 | 72 |
| Maximum Rated Output Wattage Rating | 1200 | 1200 | 1200 |
| Nominal Input Current ( A rms ) | 38 | 28 | 19 |
| Maximum Rated Input Wattage Rating ( Watts ) | 1380 | 1350 | 1365 |
| Maximum Rated VA ( Volt-Amp ) | 1380 | 1350 | 1365 |
| Efficiency ( % ) | 87 | 89 | 88 |
| Power Factor | N/A | | |
| Leakage Current ( mA ) | N/A | | |
| Maximum Inrush Current ( A peak ) | 20 | 25 | 35 |
| Maximum Inrush Current duration ( mS ) | 1 | 1 | 3 |
| Maximum British Thermal Unit Rating ( BTU-Hr ) | 4713 | 4610 | 4662 |

NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor

- Click on "ProLiant Servers"
- Click on the Server of interest. Example: DL385 G7
- Click on: "Power Calculator" link. (You may need to scroll down to see it)

| | | | |
|---|---|---|---|
| System Unit | **Dimensions** (H x W x D) (with bezel) | 3.38 x 17.54 x 27.25 in (8.59 x 44.54 x 69.98 cm) | |
| | **Weight** (approximate) | Maximum (all hard drives, power supply, and processor installed) | 60 lb (27.22 kg) |
| | | Minimum (one hard drive, power supply, and processor installed) | 45.90 lb (20.81 kg) |
| | **Input Requirements** (per power supply) | Rated Line Voltage | 100 to 120 VAC<br>200 to 240 VAC |
| | | Rated Input Current | For 1200 W Power Supply:<br>10 A (at 100 VAC),<br>4.9 A (at 200 VAC)<br>For 750 W Power Supply:<br>8.9 A (at 100 VAC),<br>4.3 A (at 200 VAC)<br>For 460 W Power Supply:<br>5.5 A (at 100 VAC),<br>2.6 A (at 200 VAC) |
| | | Rated Input Frequency | 50 to 60 Hz |
| | | Rated Input Power | For 1200 W Power Supply:<br>930 W (at 100 VAC),<br>1348 W (at 200 VAC)<br>For 750 W Power Supply:<br>857 W (at 100 VAC),<br>824 W (at 200 VAC)<br>For 460 W Power Supply:<br>526 W (at 100 VAC),<br>505 W (at 200 VAC) |
| | **BTU Rating** | Maximum | For 1200 W Power Supply:<br>3530 BTU/hr (at 100 VAC),<br>4600 BTU/hr (at 200 VAC)<br>For 750 W Power Supply:<br>2925 BTU/hr (at 100 VAC),<br>2812 BTU/hr (at 200 VAC)<br>For 460 W Power Supply:<br>1794 BTU/hr (at 100 VAC),<br>1725 BTU/hr (at 200 VAC) |
| | **Power Specifications** | NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor | |
| | **Power Supply Output** (per power supply) | Rated Steady-State Power | For 1200 W Power Supply:<br>800 W (at 100 VAC),<br>900 W (at 120 VAC),<br>1200 W (at 200 to 240 VAC)<br>For 750 W Power Supply: |

| | | |
|---|---|---|
| | | 750 W (at 100 to 120 VAC),<br>750 W (at 200 to 240 VAC)<br>For 460 W Power Supply:<br>460 W (at 100 to 120 VAC),<br>460 W (at 200 to 240 VAC) |
| | Maximum Peak Power | For 1200 W Power Supply:<br>800 W (at 100 VAC),<br>900 W (at 120 VAC),<br>1200 W (at 200 to 240 VAC)<br>For 750 W Power Supply:<br>750 W (at 100 to 120 VAC),<br>750 W (at 200 to 240 VAC)<br>For 460 W Power Supply:<br>460 W (at 100 to 120 VAC),<br>460 W (at 200 to 240 VAC) |
| System Inlet Temperature | Operating | 10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed.<br>System performance may be reduced if operating with a fan fault or above 30°C (86°F). |
| | Non-operating | -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr). |
| Relative Humidity (non-condensing) | Operating | 10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing. |
| | Non-operating | 5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing. |
| Altitude | Operating | 3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min). |
| | Non-operating | 9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min). |

Acoustic Noise

Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).

NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

| Idle | 1P SKU | 2P SKU |
|---|---|---|
| LWAd | 4.1 B | 4.5 B |
| LpAm | 23 dBA | 25 dBA |

| | | | | |
|---|---|---|---|---|
| | | Operating | 1P SKU | 2P SKU |
| | | LWAd | 5.3 B | 5.6 B |
| | | LpAm | 36 dBA | 38 dBA |
| | Emissions Classification (EMC) | FCC Rating | Class A | |
| | | Normative Standards | CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1 | |

NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

| | | |
|---|---|---|
| HP Integrated Lights-Out 3 (iLO 3) integrated on system board | Architecture | PCI Express based health and remote management ASIC |
| | Processor | PCI Express RISC processor core running at 250MHz |
| | Upgradeability | Option firmware upgradeable via Flash ROM. |
| | Video Support | 1600 x 1200 DVR max resolution |
| | Interfaces | One Ethernet Sideband connection (10/100/1000 Mb/s) |
| | | One Ethernet network connection (10/100Mb/s) |
| | Memory | 128-MB DDR with ECC |
| | Operating System Support | Microsoft Windows 2008 R2 |
| | | Microsoft Windows 2008 (32 bit and 64 bit) |
| | | Microsoft Windows Server 2008 Standard Edition (32bit and 64bit) |
| | | Microsoft Windows Server 2008 Enterprise Edition (32bit and 64bit) |
| | | Microsoft Windows Server 2003 and Windows Server 2003 R2, and Windows Server 2003 for Extended Systems Standard Edition, Enterprise Edition |
| | | Red Hat Enterprise Linux 5.4 (32 bit and 64 bit) |
| | | SUSE Linux Enterprise Server 11 (32bit and 64bit) |
| | | SUSE Linux Enterprise Server 10 (32bit and 64bit) |
| | | VMware ESX 4.0 |
| | | VMware ESX 3.5.0 |
| | Client System Support | Microsoft Windows 7 |
| | | Microsoft Windows XP Professional Edition |
| | | Microsoft Windows Vista Business and Ultimate Editions |
| | | Red Hat Enterprise Desktop 5.00 |
| | | SUSE Linux Enterprise Desktop 11 |
| | | SUSE Linux Enterprise Desktop 10 |

| | | |
|---|---|---|
| | Client Browser Support | Microsoft Internet Explorer 8<br>Microsoft Internet Explorer 7<br>Microsoft Internet Explorer 6<br>Firefox 3.5 (on supported Windows and Linux systems)<br>Firefox 3.0 (on supported Windows and Linux systems) |
| | Command Line Support | Secure Shell and serial port access<br>Secure Socket Layer<br>Secure Shell version 2 |
| | Security | Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser, CLP and XML scripting interface<br>AES encryption of video<br>RC4 encryption of video |
| | Directory Support Services | Active Directory v1.0 (Windows 2003) |
| | Driver Support | HP ProLiant iLO3 Management Controller Driver Package |
| | Management protocols supported | SNMP, IPMI 2.0 (system and LAN interface), DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP), HP RIBCL XML |
| Smart Array P410i Controller | Dimensions | Embedded |
| | Disk Drive and Enclosure Interface - Transfer rate | 6Gb/s SAS (Serial Attached SCSI)<br>3Gb/s SATA (Serial ATA) |
| | SAS Connectors | 2 internal 4X connectors |
| | Cache Memory Speed | DDR2-800MHz with 40 or 72-bit wide bus |
| | Server Interface | x4 PCIe 2.0 provides 2GB/s maximum bandwidth |
| | SAS Speed | 8 6Gb/s SAS links provide 4.8GB/s maximum bandwidth |
| | Cache Memory | Zero Memory RAID has no cache memory<br>40-bit 256MB ECC protected cache (battery upgrade available)<br>72-bit 512MB BBWC or 72-bit 512MB and 1G FBWC |
| | Logical Drives Supported | Zero Memory, Up to 2 logical volumes (8 physical drives)<br>Up to 64 logical drives with cache |
| | Host Memory Addressing | 64-bit, supporting greater than 4GB server memory space |
| | RAID Support | RAID 6, 6+0 (Advanced Data Guarding)<br>NOTE: RAID 6, 6+0 can be enabled with one of the following combinations:<br>• 256 MB cache, Battery kit and Smart Array Advanced Pack License key option upgrades<br>• 512 MB BBWC/FBWC and Smart Array Advanced Pack License key option upgrades<br>• 1G FBWC and Smart Array Advanced Pack License key option upgrades<br>RAID 5, 5+0 (Distributed Data Guarding)<br>NOTE: A minimum or 256 MB cache is required to enable RAID 5, 5+0 support |

| | | | |
|---|---|---|---|
| | | RAID 1+0 (Striping & Mirroring)<br>RAID 0 (Striping), RAID 1 (Mirroring) | |
| Two HP NC382i Dual Port Multifunction Gigabit Server Adapters | Network Interface | 10Base-T/100Base-TX/1000Base-TX | |
| | Compatibility | IEEE 802.3 10Base-T<br>IEEE 802.3ab 1000Base-T<br>IEEE 802.3u 100Base-TX | |
| | Data Transfer Method | PCI Express, four lanes (x4) | |
| | Controller | Broadcom5709C | |
| | Network Transfer Rate | 10Base-T (Half-Duplex) | 10 Mb/s |
| | | 10Base-T (Full-Duplex) | 20 Mb/s |
| | | 100Base-TX (Half-Duplex) | 100 Mb/s |
| | | 100Base-TX (Full-Duplex) | 200 Mb/s |
| | | 1000Base-TX (Half and Full-Duplex) | 2000Mb/s |
| | Connector | Two RJ-45 | |
| | Cable Support | 10Base-T | Categories 3, 4 or 5 UTP; up to 328 ft (100 m) |
| | | 100Base-TX | Category 5 or higher UTP; up to 328 ft (100 m) |
| | | 1000BaseTX | Category 5 or higher UTP; up to 328 ft (100 m) |
| Environment-friendly Products and Approach | End-of-life Management and Recycling | Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.<br><br>The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment. | |

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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.